



AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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NEW-YORK, AUGUST 1, 1835.

HARTFORD AND NEW-HAVEN RAILROAD.

We give to-day a long extract from the Report made by ALEXR. C. TWINING, Esq., of his survey of the route for a Railroad between these two cities. This road by itself would undoubtedly be a profitable work ; but, taken in connection with others, which will beyond all question be constructed between Hartford and Worcester, and up the valley of the Connecticut river to Windsor, Vt., and eventually to Canada line, it will become one of the thoroughfares of the country.

We should have given this Report in our last, if it had been received in time—and have called attention to the opening of the books yesterday at the Union Bank in this city, for subscription to the stock.

The Winchester Republican of 22d ult., says that "William H. Morell, Esq., has been appointed Engineer in Chief of the Winchester and Potomac Railroad Company, to fill the vacancy occasioned by the resignation of Moncure Robinson, Esq. This is a most excellent appointment. Mr. Morell comes from a race distinguished, in their native north, for talent and worth ; and he adds to these qualities, energy and experience in his profession."

The Alton Spectator says that "the survey of the Railroad route between Springfield and Alton progresses, according

to our last accounts, with rapidity and success, under the auspices of General Mitchell."

ANOTHER LINK.—The great Atlantic Railroad progressing.—The Portsmouth Journal says : "We are happy to announce to our readers the gratifying intelligence, that the stock in the Railroad from this town to Massachusetts line in the direction of Newburyport and Boston is taken up."

"On Thursday, the Committee appointed at the meeting of Tuesday evening, made preparations to open a Subscription for the Railroad Stock, and in the evening a few individuals subscribed. Yesterday morning the books were opened at several places of resort, and before noon the entire capital Stock, amounting to *Two Hundred Thousand Dollars* had been taken,—the anxiety to obtain Stock being so great, that the Committee were induced to increase the capital stock *fifty thousand dollars* beyond what was contemplated by the meeting of Tuesday evening."

AND YET ANOTHER.—The Philadelphia Commercial Herald says : We learn that a general meeting of the Stockholders of this Company was held yesterday, at which it was unanimously resolved to increase the Capital Stock of the Company, from six hundred thousand to one million of dollars. This amount will enable the Directors to complete without delay, the entire route between Trenton and New-Brunswick, by means of a Railroad, on the route of the present Straight Turnpike, to build a Bridge over the River Delaware, at Trenton, and to complete a second track between this City and Morrisville. A resolution was also unanimously passed, approving of the purchase by the Directors of the Philadelphia and Trenton Railroad Company, of the majority of the stock of the Straight Turnpike."

COLUMBIA RAILROAD—INCLINED PLANE.

—The Philadelphia Herald says, "We learn that there is strong probability of a route being obtained by which the inclined plane on the west side, and near the Schuylkill river, may be avoided and the rise overcome by a grade of not more than 25 feet to the mile. The route leaves the present road at the foot of the plane, and leans to the right

for about fifteen miles, when it again unites with the road. By this route the distance is increased only about a mile and a half. A reconnoissance was made of this route at the request of the Canal Commissioners, by Mr. Gill, who deemed it practicable. Mr. Gay, we understand, is now engaged in making a minute survey of the route. If the plane can be dispensed with, the public will undoubtedly demand that it shall be done."

Is it not singular that a discovery so important should have been made at *this late period* ? If so, it would appear that a desire to complete, had entirely cast into the shade the importance of selecting the best route for, this *great work*. It is however better, even late than never, to discover and acknowledge our errors.

[From the Pittsburg Advocate.]

EXTENSION OF THE BALTIMORE AND OHIO RAILROAD.—The visit of Jonathan Knight, Esq. to our city having attracted attention to this important subject, a meeting of the citizens of Pittsburgh and its vicinity took place at the Exchange, on Friday, the 24th inst. A full and frank conference was held with that gentleman, in which he expressed the belief that a liberal subscription at this place would lead to the immediate undertaking of the western section of the road, and insure its termination at Pittsburg. It being now certain, through the liberality of the Legislature of Maryland, that an artificial communication will be completed from Baltimore and Washington to Cumberland, the question is one of vital importance to Pittsburg—what course the trade shall take from that point ? The meeting having fully come to order, by appointing Isaac Lightner Chairman, and Geo. Cochran Secretary, the following resolution was unanimously adopted :

Resolved, That a committee of seven be appointed to correspond with the officers of the Baltimore and Ohio Railroad, on the subject of the contemplated extension ; to ascertain the condition and stipulations which may accompany any subscription made at this place, and to take such measures generally as shall seem best calculated to place the subject in all its bearings before our citizens, in a distinct and authentic form.

The chairman appointed the following committee : Richard Biddle, W. Robinson,

Jr., Wm. Hays, James Brown, Wm. Wade, Thomas S. Clark, and Charles Shaler.

On motion, the chairman was added to the committee.

On motion, Resolved, That the proceedings of the meeting be published.

ISAAC LIGHTNER, Chairman.
GEO. COCHRAN, Secretary.

[From the Baltimore American.]

We made a day or two since a trip on the Washington railroad, starting with a train of three commodious and very large cars, each capable of holding sixty passengers, and all drawn by one steam engine. The average speed of the train was about eighteen miles per hour, and it frequently exceeded twenty five, the engine being under perfect command, suddenly moderating its gait at the curvatures, or in passing the highest embankments, and stopping at a short notice. We had the pleasure of witnessing a new application, not exactly of steam power, but of its generator the boiling water, by the ejecting of which the engineer quickly cleared the road of some obstructing cows.

We take the opportunity of calling the attention of the company to the policy and propriety of accommodating way-passengers. People residing on the line of the road have reason to complain if they cannot have the benefit of its construction, without the inconvenience of going several miles to one of the few regular stopping places. Such too is the facility of arresting the engine that the delay occasioned by taking in or letting out a passenger is but momentary.

The passage of the cars is a novel sight which attracts the inhabitants of the country long distances to witness; and well it may, for it is enough to excite a special wonder to behold a row of long houses roaring along the road, borne at the rate of thirty miles an hour by the snorting engine.

The train came yesterday morning from the depot beyond Bladensburg to that on the outskirts of Baltimore, in one hour and fifty minutes, the distance being about thirty three miles. This is the average time taken to make the trip, and proves that when the whole route shall be completed the passage between Baltimore and Washington will be made with ease in two hours, stoppages included.

ITHACA AND OWEGO RAILROAD.—At a meeting of Citizens of Tompkins County held in Ithaca on the 19th instant resolutions were passed in favor of the New York and Erie Railroad. It was also

Resolved, That a cheap and rapid communication from the heart of Tompkins county to our great commercial mart, through the Ithaca and Owego and New York and Erie Railroads, at a much less distance than a circuitous route by water communication, which can be travelled in much less time, and at seasons when the latter cannot be used at all, is a matter of great importance, of which our citizens should not lose sight.

UNION CANAL.—During the week ending the 17th inst., the amount of tolls received was \$2,309 11. Former report \$26,417 44. Whole amount of receipts this season, \$28,729 52.

We learn that no boats have passed through this canal from the west, since the breach which occurred, on the 18th inst., in the Pennsylvania canal at Highspire. [Phil. Com. List.]

SCHUYLKILL NAVIGATION.—During the week ending the 17th instant, the receipts for tolls amounted to \$6,702 23. Former report \$180,928 34—making the total receipts this season, \$187,631 22.—[ib.]

LEHIGH COAL TRADE.—Despatched from Mauch Chunk during the week ending the 17th inst., 136 boats, carrying 4458 tons—cwt. Former report, 1381 boats, carrying 43,576 tons—cwt. Total this season 1517 boats, carrying 53,034 tons—cwt. of Coal.—[ib.]

RAPID MOVEMENT.—Passengers who left Norfolk on Monday morning at 6 o'clock in the steamboat Champion, were in the hotels in Baltimore at half past 7 o'clock the same evening, having made the run in thirteen hours and a half—distance 900 miles.

[From the Worcester Palladium.]

RAILROAD SURVEY.—ENGINEER'S REPORT.

Boston, July 1, 1835.

To the Chairman and Members of the Executive Committee for the survey of the route of the Western Railroad.

Gentlemen: Agreeably to your request, that I would give some details of the route for the Railroad between Worcester and Springfield, as developed by the surveys and examinations thus far made, I herewith present the following statement, with the remark, that the preliminary surveys are not completed, and further examinations may enable me to improve even upon the favorable route already obtained—I would also add, that I have examined the route from Springfield to Hartford, with a view to the continuation of the road in that direction, and will state the circumstances under which that continuation may be made.

1st. The route to Springfield from the point of junction with the Worcester railroad half a mile east of the Main street in Worcester, by South Leicester, Spencer, Brookfield, Warren, Palmer, Monson and Wilbraham, into the village of Springfield, is 53½ miles in length; the average rise is 9 feet, and the average fall 17 feet per mile going west, and in no place exceeding 34 feet to the mile in either direction; the grading along this route is very generally favorable, and the estimate of cost will be nearly as follows:

For grading, masonry, &c. including engineering and every contingency, \$11,000 per mile, 559,000

The superstructure or Railway including turn outs, \$8000, 428,000
Land, damages, fencing, engines, cars and depots, 182,000

Total, \$1,200,000

2d. The distance to Hartford from this route down the Connecticut river is 23 miles, passing over a remarkably level and favorable country, the fall on which will not exceed 2½ feet per mile—the estimate for cost is for grading, masonry, &c., including a bridge across Connecticut river, Engineering and every contingency, \$6000 per mile, 138,000

For the superstructure or railway, including turn outs, \$8000 per mile, 184,000
Lands, damages and fencing, engines, cars and depots, 78,000

Total, \$400,000

3d. For the whole distance by these routes from Worcester to Hartford, with no radius of less than 1500 feet, we have 76½ miles, and the maximum inclination as stated above, 34 feet to the mile—the average rise to Hartford 6 feet, and the fall 12½ feet to the mile. The estimate is for grading, masonry, &c. including bridge across the Connecticut River, engineering, and every contingency, \$9,500 per mile, 727,000

The superstructure or railway including turn outs, \$8000 per mile, 612,000

Land, damages and fencing, engines, cars and depots, 261,000

Total, \$1,600,000

The foregoing estimates contemplate the use of the heaviest edge rail and the best materials for the superstructure, and all other parts of the work, for engines, cars and depot arrangements, for a much larger amount of the transportation and travel than at present over the route.

The annual expenses on the route from Worcester to Springfield, estimating as I

have before, for a much larger amount of transportation than there is at present between the two places, I think will not vary materially from the following.

For salaries of superintendent and 45 others, to wit:

Assistants, clerks, engine and firemen,	\$21,000
depot and brakemen,	18,000
Fuel for twenty trains per day,	
Repairs and depreciation of engines and cars 18 per ct.	19,000
Repairs of road at 500 dollars per mile,	27,000
	\$85,000

The annual expenses on the route from Springfield to Hartford would be less in proportion to its length than the above, on account of its directness, and the near approach to a level, and would allow an average rate of travelling 1½ faster than on any equal distance of the route east of Springfield; or the 23 miles between Springfield and Hartford would be run as soon as any twenty miles from Springfield towards Worcester. The preliminary surveys are still progressing, and the approximated location will be made as soon as these are completed. Very respectfully, your obedient servant,

J. M. FESSENDEN, Engineer.

Extract from the Report of the Engineer, upon the Preliminary Surveys for the Hartford and New-Haven Railroad.

The following table has been arranged with reference to this last mentioned route by Holt's hill, by throwing together all the excavations of a similar depth, and all the embankments of a similar height, in such a way as to give a correct and ready view, both of the extent and depth of cutting and filling, and their relative proportion to each other upon the entire route.

Upon this plan, there will be of excavation and embankment,

Excavation, 2 feet deep, 6.30 miles.
do. 6 " " 9.11 "
do. 12 " " 2.69 "
do. 26 " " .30 "

Embankment, 2 feet high, 9.50 miles.
do. 6 " " 5.70 "
do. 15 " " 2.58 "
do. 25 " " .32 "

Entire length of excavation, 18.40 miles.
do. do. of embankment, 18.10 "
do. do. of bridges, .14 "

Entire length of route,] 36.64 miles.

The excavation will be sand, gravel, and clay, in a nearly equal proportion, with a considerable amount of ditching and wet digging in mud and vegetable matter. The amount of rock is estimated at 83,988 cubic yards,—mostly solid rock, and that chiefly red sand-stone and slate.

The following table is arranged in such a manner as to exhibit the entire extent of the inclinations of the same degree throughout the whole route. It will be noticed, that the steepest inclinations are but thirty feet to the mile.

Ascending to the north.	Inclination to the mile.	Descending to the north.	Extent of similar inclinations.
	Level		13.16 miles
5.82 miles	9 feet and under	0.75 miles	6.57 "
2.18 "	13 feet	1.05 "	3.23 "
2.78 "	26 feet	2.36 "	5.14 "
3.70 "	30 feet	4.84 "	8.54 "

14.88 miles ascend'g | descend'g 9.00 miles | 36.64 miles

About twenty miles of the route is disposed in straight lines. The remaining

sixteen miles and two thirds consists of curves, which may be turned on radii of from five thousand to twenty thousand feet; except at the entrance of the two cities, where curves of about twenty-five hundred feet would probably be expedient.

Estimate of Grading.

For the convenience of statement, the line will be disposed into sections, that will be estimated each by itself; and these separate estimates will be brought together, to make the general result. In all the sections, I suppose the road to be thirty feet wide at the level of the grade, (but to provide for contingencies, the calculations are in fact made for a width of thirty-five feet.) A single track only is supposed to be at first employed. The masonry is to be generally dry work, at \$1.50 the perch of twenty-five feet; but at \$3 the perch, when mortared, or dressed with particular care, to joints and beds. The bridges are supposed to be a simple truss-work, or string-pieces, braced from beneath, and sustained by abutments, and sometimes piers of masonry.

NEW-HAVEN SECTION.

This commences at the foot of East street, passes the embankment and bridge at Mill river, and the deep cut at the base of East Rock, and ends near the margin of the salt marsh, three miles from New-Haven. Excavation is sand and gravel; the principal body to be transported a half mile by a temporary railway, to form the embankment at the Mill river.

Grading East street, past Barnsville,	\$3,876 50
Embankment at Mill river, and excavation opposite East Rock,	18,500 00
Bridge across Mill river, (foundations to be piled,)	8,174 00
Road bridge for Middletown turnpike,	556 00
One mile light excavation and embankment,	2,086 19
Three crossings for farms,	325 00
Grubbing and clearing,	75 00

Cost of New-Haven Section, 3 miles, \$33,592 69

QUINIPAC SECTION.

This proceeds with a low grade, along easy ground, to the crossing of the Quinipiac, a little south of North-Haven bridge; then upon the sandy plains east of that stream, as far north as to the bend of the river and the foot of the high grounds of Meriden, sixteen miles from New-Haven.

Excavation and embankment, thirteen miles,	\$49,595 38
Ditching salt marsh and wet ground, 60 chains,	1,200 00
Changing North-Haven road 420 rods,	1,050 00
Bridge at crossing of Quinipiac, 150 feet long,	2,116 00
Six bridges and two crossings for public roads,	3,674 00
Thirteen crossings for farms,	750 00
Culvert, ten feet span, for Horton's brook,	1,500 00
Culvert for brook opposite Yalesville,	1,500 00
Ten small culverts,	2,650 00
Grubbing and clearing,	200 00

Cost of Quinipiac Section, 13 miles, \$64,235 38

MERIDEN SECTION.

This turns from the river into the valley leading to Holt's hill,—cuts through the hill,—passes along much swampy ground to the first dividing summit, and then along the east of the Beaver ponds, ending to the

north of these, nearly opposite the turnpike gate, and twenty-one miles from New-Haven.

Excavation of Holt's hill, 48 chains, viz.:	
Wet earth 33,088 cubic yds., at 20 cts.,	\$6,617 60
Red Rock 32,648 cubic yds., at 60 cts.,	19,588 50
	\$26,206 40

Excavation at summit, 36 chains, viz.:	
Earth 10,028 cubic yards, at 12 cts.,	\$1,203 36
Loose rock 9,000 cubic yards, at 25 cts.,	2,250 00
Solid rock 9,000 cubic yards, at 60 cts.,	5,400 00
	8,853 36

Excavation and embankment, 3 miles 76 chains,	26,885 40
Harbor brook culvert at Meriden, ten feet,	1,500 00
Culvert for brook from summit,	750 00
Three small culverts,	600 00
Ditching wet ground, 88 chains,	1,584 00
Changing road near Meriden, 50 rods,	75 00
Two road bridges and one crossing,	1,450 00
Five farm crossings,	500 00
Grubbing and clearing,	350 00

Cost of Meriden Section, 5 miles, \$68,754 16

BERLIN SECTION.

This runs along the west margin of the 'Old Fly,' till it cuts through the ridge at its northern outlet; it then passes the defile in the next ridge,—crosses Brandegee's pond on to the Worthington hill, and descends to the Berlin flats, which it passes to their northern border, and terminates at the southern opening of the Green swamp. Length six miles.

Embankment along the 'Old Fly,' six feet high for 87 chains, with ditching and clearing,	\$11,564.80
Two culverts for Beaver brook,	1,500.
Excavation through two ridges, and embankment across meadow, &c., to factory pond	12,541.14
Rock in meadow, 14,600 cubic yards,	8,300.
Bridge 200 feet, across factory pond,	7,200.
Culvert for Beaver brook,	1,000.
Embankment and excavation on Worthington sideslope, one mile and a quarter,	8,388.81
Embankment on flat 14 feet high, 33 chains long,	10,118.88
Excavation and embankment on flat, 1 mile 73 chains,	3,850.
A bridge and two culverts for streams,	1,850.
Bridge and two crossings,	1,000.
Three farm crossings,	300.
Grubbing and clearing,	125.

Cost of Berlin Section, 6 miles, \$67,738.63

GREEN SWAMP SECTION

This extends through the swamp by a low embankment, with wide and deep ditches on each side. It passes on to the table and, cuts through 'Dirty swamp,' and terminates near the brick-yards, on the other side of the gully which is made by a south-western branch of the Hog river. The soil is all clay. Length six miles.

Excavation and embankment in swamp, 3 miles 57 chains,	\$10,143.95
Ditches,	3,645.
Culvert, ten feet, for Green swamp brook,	1,500.

Bridge for New-Britain road, also one crossing,	650.
Two farm crossings,	200.
Excavation and embankment, 1 mile 76 chains,	14,051.44
Embankment across gully of Little river,	7,558.04
Bridge for old road to Farmington and Hartford,	1,050.
Culvert for branch of Little river,	2,500.
Grubbing and clearing,	275.

Cost of Green swamp Section, 6 miles, \$41,872.03

HARTFORD SECTION.

This courses along the broken ground west of the Hog river, and enters Hartford from the west, passing between the Asylum and the Hog river, and north of Imley's mills, into Pearl street. Length three miles and fifty-one chains. Soil all clay, and grubbing considerable.

Excavation and embankment to doubling of Hog river, 3 1/2 miles,	\$29,067.77
Rock near Hartford, 18,740 cubic yards,	9,370.
Embankment by Imley's mill, 18 feet high, 30 chains long,	12,378.
One culvert \$1000, and seven small do. \$250 each,	2,750.
Four crossings,	400.
Bridge across north-west branch of Hog river, 100 feet,	3,592.
Two bridges across doublings of Hog river, 75 feet each,	10,068.
Grubbing and clearing,	350.

Cost of Hartford Section, 3 miles 51 chains, \$67,873.77

Recapitulation.

New-Haven Section, 3 miles,	\$33,592.69
Quinipiac do. 13 "	64,235.38
Meriden do. 5 "	68,754.16
Berlin do. 6 "	67,738.63
Green swamp do. 6 "	41,872.03
Hartford do. 3.64 "	67,873.77
	36.64
	\$344,066.66

Cost of grading by Holt's hill, 36.64 miles, \$344,066.66, being per mile \$9,390.47.

It may be observed, in passing, that, by the estimates which have been made of the other routes, but which need not be given in detail, the results upon those other routes would vary from the above as follows:

Cost of grading by Sodom brook, 36.65 miles, \$333,998.33; cost of grading by Kensington, say 36.31 miles, \$344,338.84.

Superstructure.

Upon the road, when graded, there may be laid, (if in the end such a construction shall be deemed advisable,) a wooden superstructure, with a flat iron rail, at an expense of about \$4000 to the mile. But the policy of adopting such a structure appears to me at present very questionable, both from considerations of economy, arising out of the cost and inconvenience of repairs upon a perishable structure, and from considerations drawn from the relation in which this road will stand to other lines of communication. It can hardly be doubted, that this road, (in addition to its contemplated extension to Springfield,) will, after being made, be speedily extended to Worcester. It will in that case connect with the Boston and Worcester railroad, forming with it one line of communication; and it would seem to be desirable, that the structure of this should not be exceeded in permanent excellence by the structure of that.

Besides, this whole route is to come into competition with other thoroughfares from New-York to Boston,—the most prominent of which will be the Boston and Providence railroad. When we consider the excellent navigation by steamboats, which is open at all seasons from New-York to New-Haven, and the inducements to travellers which are offered by the cities of New-Haven and Hartford, and the town of Worcester, it appears reasonable to expect, that the high advantages of this route will make it, to a greater degree than any other that can be selected, the rival route to the Boston and Providence railroad, (the great amount of whose destined business would soon secure it rivals in any event.) Under an expectation of this sort, it would be shortsighted to calculate for any thing less than a superstructure of a very substantial and excellent kind; and it would be, to say the least, unsafe, in our early operations, to incur the hazard of trammeling the future directors of this work, by estimating now on the idea of a cheap but perishable structure, when there is a prospect that they may wish to adopt a durable but more expensive one. I am decided, therefore, as to the propriety of making an imperishable construction the basis of these present estimates.

Among the superstructures of this character which have been either proposed or adopted, I prefer the one which has been arranged for the Brooklyn and Jamaica railroad by Major D. B. Douglass, the Engineer. As a railway it has many features in common with certain ways already laid, and in actual use; but it has other features peculiar to itself. I give preference to this, because it is at once very substantial and durable, and of moderate cost; and is at the same time better fitted, (as I judge,) to avoid *unequal* and *permanent* displacement by frost, than either the wooden frame, or the cross-sleepers bearing upon longitudinal trenches of broken stone,—unless with additional and expensive transverse trenches. The bearing of this railway is to be upon stone slabs of twenty inches square, or an equivalent surface, and from three and a half inches to four and a half inches in thickness. These slabs are to be embedded in the sand,—one in each lineal yard, for the whole extent under both rails. Upon the two corresponding slabs of each yard there will come down a transverse sleeper of red cedar, five inches square and seven feet long. This sleeper is to receive upon it, at each end, directly above the central bearing on the slab, a cast iron chair set into it, and secured by wood screws; which chair becomes, together with its fellows, the bed of a rolled iron edge rail, of 40 lbs. to the yard, which must be suitably secured in its place by keys. The whole body of transverse sleepers being thus three feet apart, are to be bound together by two parallel pieces of scantling, spiked on longitudinally,—one on each side of the centre; and these will also be a lateral support to the gravel which is to form the horse-path. The following will be the cost of one lineal yard of a superstructure of this kind:

Two slabs dressed,	65 cents.
One sleeper notched,	55 "
Two chairs, 13 lbs. each,	44 "
Four wood screws,	9 "
Two yards of rail, 40 lbs. 1.79	"
Two keys and gibbs,	4 "
Scantling,	18 "
Four spikes for do.,	4 "
Setting two chairs,	8 "
Putting down work,	25 "

\$4.10 cents.

Cost by the yard, \$4.10 cents; or
by the mile, \$7.216
Say for a horse path and contingencies, 284

Cost per mile in round numbers, \$7,500

ESTIMATE FOR THE FINISHED RAILROAD.

For grading 36.64 miles for double track.	\$344,066.66
For one track laid, at \$7,500 per mile,	274,800
Turnouts,	10,000
Fencing 25 miles, at \$720, and damages,	40,000
Four locomotives and tenders, at \$6,500,	26,000
Twenty passenger carriages, at \$850,	17,000
Thirty burden cars, at \$350,	10,500
Two depots,	15,000
A carriage-house,	7,500
Engine-house and shop,	5,000
Two watering stations,	2,500
Contingencies,	30,000
Engineering and superintendence,	30,000

Cost of 36.64 miles of railroad, being per mile \$22,335.33, \$818,366.66

It will undoubtedly be necessary to form a direct connection with the steamboats to New-York, and if the expense of this be added, (as it ought to be,) the entire cost of the railroad, when ready for operation, may be stated at \$830,000, an estimate which, of course, applies only to the main road with a single track. If the company shall ever choose to construct branches, or to lay, in whole or in part, a double track, those additions will have their appropriate estimate at such time as they shall be determined on.

The sum, gentlemen, which has just been stated, may exceed, I am aware, your anticipations; and it must be admitted, that when we consider the generally favorable conditions of soil and location under which the work is to be executed, the estimate bears the appearance of a large one. But as it has been your desire to be acquainted with the exact truth, so it has been my aim to put you fully in possession of it; and I am desirous to have it understood, that in making up this amount I have kept in view the notorious fact, that the estimates of cost which have been made at the outset of almost every considerable undertaking of this kind in the United States, have been proved by the result to be far too low; and that I have intended to adjust the *standard* of this estimate so high, that the final cost of your work may not, if judiciously managed, exceed the original expectations of the stockholders. And here I would recall to your notice the general conditions of the work to which the amount above estimated is intended to apply.

The road is supposed to be put in preparation for a double track, and a single one to be laid. The prepared surface is to have a breadth of thirty feet at the level of the grade; but to provide for the contingencies that may arise in this department, the computations have been made *throughout*, in all excavations, embankments, rock, bridges, and culverts, for a breadth of thirty-five feet; and no advantage has been taken of the sometimes admissible economy of narrowing, for the present, the dimensions of deep cuts, and high embankments. These principles of computation have, doubtless, latitude enough: let us look next at the conditions under which the execution of the work is to take place.

At this part of the review we find that the line running in the direction of the ridges, will have to encounter few very untractable districts of country; that the ex-

cavation for one half of the route is of the very easiest kind, and for the other half only of ordinary difficulty; that no one very expensive bridge, or other structure, need be counted upon; that the workmanship of such incidental structures as are to be made, is supposed to be only so expensive in kind, as to insure a *substantial* and *neat* performance; and that the plan of the railway, while abundantly strong and durable, is yet one of moderate cost. Such are the grounds upon which I hold the belief, that unless a second track, in whole or in part, should be added, or branches be extended out from the main body of the road, (which, if resolved upon, must have their own estimate,) the sum of \$830,000 will complete the railroad, and put it in successful operation.

ANNUAL EXPENDITURE.

The expenses of repairs for the road and engines, and all contingent outlays for operations of this kind, are easily calculated from data derived from different roads in this country, that are in actual use. The annual expense of repairs may be taken at \$4,000.

The annual expense of transportation of burdens, such as cotton, manufactured articles, &c. would vary with the amount of this transportation, and the number of trips by the day which would be made. For the quantity of tonnage with which this road would open, we may consider the cost of transporting a ton from city to city, including fuel, oil, repairs, and attendance, at fifty cents the ton. For the number of passengers with which the road would open, there must be two trips and two return trips each day, which at \$15 the trip for 313 days, being the entire year, except Sundays, would make for the year, (including fuel, oil, repairs of engine and train, engine man, and all attendance,) \$18,780. The salaries of superintendent and clerks may be put at \$4,000. Supposing, therefore, the road to open with a business (in addition to the passage trips) that would be done by a single trip and return trip of a train of burden cars, carrying from twenty to thirty tons to each trip, and the same to each return trip, the entire annual outlay upon the railroad would be from \$33,000 to \$34,000.

Resources of the Railroad.

The amount of income which the holders of stock in this railroad may fairly count upon, is fixed, for the greater part of it, by ascertained facts; and for the rest, it must be matter, to some extent, of judgment. After carefully collating the supplies of revenue which will certainly fall into the channel of this road, and drawing cautiously upon those other currents of travel and transportation which will be within its influence, but which can fairly be counted upon only in part, I find, as the result of my own private judgment, an aggregate of annual receipts, which, after canceling the expenditures, will yield at once a fair return of interest to the stockholders. But, as this is a subject upon which every man, after having the facts before him, must be his own judge, I shall throw together, in a concise statement, the materials for forming a judgment, that are in my possession. Let me remark, however, that, if it were important for me to put down in figures my own private view of the subject, I should be far from copying after those romantic visions of per centage, in which half the projectors of useful public works throughout the world have indulged at the outset, and which have led almost of course to extensive disappointment. A judicious consideration of the subject would undoubtedly make it appear that (except in the case

of some great thoroughfares, that may be able to keep entirely aloof from competition,) the body of judicious railroads cannot, in respect of profit, range at once far above the business level of the country. But there are three considerations, which make this species of investment more desirable than an ordinary outlay. These are to be found in the *security*, the *permanence*, and the *increasing profit*, of such an investment. The estimation in which capitalists hold any investment that is both secure and permanent, even though it should yield but a moderate rate of interest, is manifest in the high customary premium upon five per cent. government stocks; and while in both these particulars, a profitable railroad stock is not inferior to a government stock, it has, in its *increasing rate of interest*, an element of value peculiar to itself.

The opinion which I have already expressed, respecting the intrinsic value of this particular railroad as a source of profit, rests upon facts which I shall now state, together with the sources, in general, from which these facts were derived.

Mr. John Babcock, general agent and proprietor of the stage lines from Hartford to New-Haven, states (as the result of actual investigation from the books) that there has been received annually, for the past five years, \$35,000 on an average; of which sum, \$5,000 was for mails. The price of passage has been \$1.50, to those coming by steamboats from New-York, who form the body of the passengers; but to those who have taken the stage at the cities, \$2. The number of passengers has therefore been 18,000 per annum; and this number corresponds with Mr. Babcock's estimate. In addition to the receipts from this source, a part of the mail money,—say \$3,000,—is to be counted on for the railroad. Also, there will be probably 2,000 of the local passengers, who now go between Hartford and New-Haven, or the intermediate towns, by private conveyance, that would, upon the construction of this work, prefer the latter.

A principal agent of the steamboat lines at Hartford, who knows the exact truth upon this subject, being applied to for information, has stated the amount of passage money taken on board the Hartford boats, at \$90,000 per annum; and he estimates the number of passengers at 30,000 annually. This estimate is thought by others, in the same line of business, to be low; indeed, if we judge from the full fare to New-York, which is \$3, that number must exclude, *in part*, those who, being way-passengers, and stopping at different places upon the river, are not to be counted upon in an estimate for the railroad.

The present number of passengers from New-York to Providence, is known to be estimated at 50,000 annually. Aside from the interposition of railroads, to vary the natural channels of intercourse, this route to Boston by Providence has been vastly superior to every other; and has taken, of course, nearly the whole long travel between the two great cities. But it is obvious, that if any other route had existed, possessing the same natural inducements, it would certainly have drawn to itself one half of the travel. If the distance from New-York to Boston is as great as it is generally taken to be, there would be, when the Hartford and New-Haven communication shall be open to Worcester, (an event which, I cannot doubt, will speedily find its accomplishment,—a charter for this railroad, as well as the Springfield road, having been already obtained to the north line of Connecticut,) a decided difference of

distance in favor of the route by Hartford. But I presume that distance to be overstated, and the distance to be, in fact, trifling; so that the times of arrival, by way of Providence, or of Hartford, will be nearly balanced. But the opening of this new route, equally advantageous with the former, will necessarily divide the travel, though in what ratio it is difficult to determine.

Besides these currents of travel, there is a great amount of passing to New-York from the north parts of Connecticut, and the south parts of Massachusetts, by the way of the Hudson river. No one can make even an *approximate* estimate of the amount which will be diverted by this railroad. When I placed it at 2,000 passengers, it was taking but one-fifth of the estimate made by others, who are as well-informed upon the subject as I am.

If, on a review of the foregoing facts, any one shall have fixed his mind upon any specific amount of travel with which the Hartford and New-Haven railroad would open at once, or any specific amount, including what would be drawn to it from other channels, as soon as the contemplated extension to Worcester shall take place, let him also consider, that his supposed number of passengers has been deduced only from the currents of travel *now* existing; and that the natural increase of activity in a region which is traversed by newly opened lines of communication, and in the country at large, may justify a greatly enlarged estimate of that number, as applying to the state of things that will exist in a few years to come. To fortify this view, let him cast an eye at the projected railroads which will centre at Hartford. First, there will be the Bolton road, which will connect, probably, with the Norwich and Willimantic railroad,—then there will be the railroad to Worcester, and that to Springfield. The railroad which is shown by the map, making off towards the Hudson river, may be considered by many a project too distant to be taken into notice here; but a petition for such a grant is even now pending, and the same connection will certainly be made through Springfield before a distant day. Of these four lines of communication, the Hartford and New-Haven railroad will be the trunk; and, through the Springfield communication, (which will certainly not terminate at the town last named,) will hereafter extend its arms into the higher parts of the Connecticut valley.

In addition to the foregoing sources of revenue, I judge from the facts before me, that the transportation of burdens upon this road will, at its first opening, be sufficient to employ at least one train of burden-cars each day, in a trip going and returning, carrying from 20 to 30 tons each way. But of this amount, and of its probable increase, some estimate may be formed from the facts which I now present.

I have received, from Elisha A. Cowles, Esq., of Meriden, a statement of the amount of transportation to Hartford and Middletown, from the villages of New-Britain, Worthington, Meriden and Wallingford, which lie on the route. This was compiled by means of a personal application to each individual named in the list. The amount is more than seven thousand tons, now transported at an expense of eighteen thousand dollars. Of this amount, two thousand tons would not pass upon the road, except in the event of a particular location, which, though as probable as any other, is not certain. I have deducted the

two thousand tons, and call the remainder equal to three thousand tons taken *through*.

The amount of transportation between Hartford and New-Haven, during the past winter, has been ascertained from the teamsters to have been three thousand tons, and the expense eighteen thousand dollars.

The Connecticut river is closed for four months in the year; and during that period, this railroad will take its place for the *whole* transportation; and during the remaining eight months, for a *part*. What the entire tonnage of the river is, has not been directly ascertained; but some light is thrown upon the subject, by the journal of the "Convention held at Windsor, Vermont, September 29 and 30th, 1830, for the purpose of taking into consideration, subjects connected with the improvement of the navigation of Connecticut river." In the report of a committee of that convention, I find, under the head of annual exports from the Connecticut river valley, the following *estimated* items: Beef, 10,181 tons; pork, lard, ham and bacon, 10,395 tons; butter and cheese, 8,050 tons; wool, about 800 tons; besides a considerable amount of other products. The imports are put, in the same estimate, at 25,000 tons. The aggregate of imports and exports in 1830, was, according to this authority, 54,426 tons, besides great quantities of lumber not here included. If these estimates are correct, it is probable, that there now comes into or passes Hartford, of both imports and exports, thirty thousand tons annually, supposing an equal amount taken off eastward by other channels.

Besides its portion of the foregoing transportation, this railroad would do a large business in winter, and a considerable business in summer, in supplying raw material to the large and numerous manufactories in Connecticut and Massachusetts, towards which it will lead, and returning to market the manufactured article. There are now at Springfield, and in the region around it, about sixty thousand spindles in operation;* and these, I should judge, (as twenty-eight thousand of the number are stated to consume eight thousand bales of cotton,) must create a transportation, to and fro, of six or seven thousand tons; and probably this same region, when its power shall be fully taken up, will transport five times, or perhaps even ten times, its present amount. A large amount of the cotton to feed these establishments would pass on your railroad,—as the new crop does not come in till the river is about closing.

It was stated by the witnesses who testified before a committee of the Connecticut Legislature, at its last session, that the manufactories upon the Hockanum and Tancarson, near Hartford, now transport from Hartford ten thousand tons of raw material, and return it in manufactured articles; that on the route to Worcester, there are, within the bounds of Connecticut, eight factories, besides paper mills, furnaces, and cupolas; and that out of Connecticut there are on the same route, in four or five towns, forty-five manufactories, both cotton and woollen, with an average business of one hundred thousand dollars annually. Their raw material is now received by way of Providence and Boston, and their manufactured articles returned to a southern market by the same route; but if an opening to New-Haven were created, this tonnage would fall into that new channel, both be-

* The number of spindles here stated is more than half the number in operation at Lowell, Mass.

cause its market is south, (at N. York and Philadelphia,) and because the saving of insurance from Boston to those cities would pay a large proportion of the entire freight to New-Haven.

When, from the foregoing facts, a just estimate shall be formed respecting the business to be done at once upon this railroad, it will still need to be greatly enhanced in order to apply to the state of things a few years hence,—in accordance with the considerations which were before applied to the subject of travel, as it is now, and as it will be soon, when the railroad shall have exercised a while its power upon the business and enterprise of the whole region within its influence, and shall have spread its branches widely by means of its junction with those other roads of which it is destined to be the trunk at no distant period.

I have the honor to be, gentlemen, your obedient servant,

ALEX' R. C. TWINING,
Engineer.

New-Haven, July 19, 1835.

We find in the Newark Daily Advertiser, the following account of something new in the way of propelling boats.

"Dr. PLANTOU, of Philadelphia, is now exhibiting at No. 92 Broadway, New-York, a model of his method of constructing and propelling steamboats, and will be happy to show and explain its principles to all who will do him the favor of a call. The principle is the propulsion of boats by means of water-tight revolving cylinders, furnished with paddles. One of these cylinders is placed at each end of the boat—and acting both as buoyancers and propellers, they effect, as the inventor very satisfactorily demonstrates, the important object of impelling the boat over the surface of the water without having to overcome the great resistance encountered by the usual method of forcing it through the water. The current created by the action of the forward cylinder, passes entirely under the boat, and by lifting it up, aids in impelling it forward.

"Dr. Plantou's models, &c. were submitted to a select committee appointed by the last Legislature of New-York, who recommended them to the favorable consideration of the canal board. The Board have since expressed their approbation of the project."

It will be seen by the following article from the Buffalo Journal, that a most important, indeed an almost indispensable improvement, of the Buffalo Harbor is about to be made:—

[From the Buffalo Whig and Journal.]

BUFFALO HARBOR—IMPORTANT PUBLIC IMPROVEMENT.—An improvement of great importance to the commercial interests of this city, which has been long projected, is, we understand, about to be accomplished, by individual enterprise. Buffalo harbor, as is well known, is constituted wholly of Buffalo Creek—no part of the lake being susceptible of occupancy as harbor; and as that stream is narrow though deep, the harbor extends far inland. A difficulty has always existed, and is yearly increasing, arising from the crowded state of the harbor, near the entrance, rendering it difficult and toilsome to pass vessels in. Hence it is that the remark is often made, namely, Buffalo harbor is too small: when, in truth less than one twelfth of the harbor is yet occupied.

To add to the ease of egress and ingress, and to augment the facilities of occupying and improving all parts of our harbor front, we learn that a contract has been closed by several gentlemen, with Col. O. H. Diddle, for carrying out the original project of Joseph Elliott, Esq., thus forming another mouth to Buffalo Harbor. At the easterly line of our city, the Buffalo Creek approaches

to within eighty rods of the Lake shore. At this point a cut is to be made, one hundred feet in width, from the harbor to the lake of sufficient depth for navigation, and secured, at the Lake end, by a pier extending into the Lake. This entrance will be a mile or more from the present one: and by doubling the facilities of admission and departure, will largely provide for the rapidly augmenting commerce of our Lakes. The work we learn, is to be completed the ensuing season, and when done to be dedicated to the public, without any charge or incumbrance, whatever.

NEW YORK AND ERIE RAIL ROAD COMPANY.—We take great pleasure in stating, upon unquestionable authority, that this Company, by their directors, engineers and agents, have made very rapid progress during the present summer, towards completing the arrangements necessary for commencing the actual execution of this great work—and that the public may confidently expect that at least fifty miles will be put under contract during the ensuing autumn.

By inquiries actively prosecuted, under the personal inspection of some of the Directors, they have acquired increased confidence in the practicability and productiveness of the work. The Allegany river, which more properly might be denominated the Upper Ohio, is represented as affording the strongest incentives to exertion, by supplying to this city the means of a rapid, safe and cheap communication with the great line of cities and villages along the Ohio, during the whole of the early spring, and especially during the season when our commerce is obstructed by the ice on the canals and on Lake Erie.

It is believed that the company, if properly supported by the public, will be able to extend their road to this most valuable river, within five years from the present season. It is also highly gratifying to learn that the enterprising and liberal spirited inhabitants along the line, are exerting their utmost efforts to facilitate the progress of the work, not only by making and procuring gratuitous cessions of the land required for the road-way, but also by subscribing to the extent of their means, to the stock of the company. We learn, too, that the surveys made during the present summer, have still further improved the route of the road, as well in shortening the line, as diminishing its cost.—[N. Y. American.]

An Engineer at Rouen has according to the National Gazette, obtained a patent from the French Government, for a suspension bridge, with an arch sufficiently high to admit the passage under it of the highest mast.

The Gazette adds that "the draw bridge is said to be of so simple a construction, that it may be raised by one person with the greatest ease." But if the arch is so high, as to admit the passage under it of the highest mast, what use is there for a draw-bridge?

RAILROAD BETWEEN PORTLAND AND QUEBEC.—A public meeting was held in Quebec on Monday, 20th inst., to consider the proper preliminary steps to be taken in favor of this enterprise. J. W. Woolsey was in the chair, K. Fisher Secretary.—Mr. A. Smith, one of the Commissioners appointed by the State of Maine, was introduced to the meeting, and explained the views and wishes of Maine on the subject, all which tended to increase the facilities of intercourse between the United States and Canada. He was received with cheering, and resolutions were subsequently passed, asking the concurrence of the Governor of Canada, in the efforts making by Maine, and in those which the citizens of Quebec stand ready to make.

Morris Canal Collector's Office,
NEWARK, July 27, 1835.

Arrived from the 15th to the 26th July, from Mauch Chunk, Easton, Washington, Port Colden, Stanhope, Dover, and other places:

126 boats with coal—	2531 6 tons
59 do. with other articles—	1009 12 tons

185 boats	3540 18 tons
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Cleared during the same period:

71 boats with merchandise—	1033 00 tons
115 do. in ballast—coal boats	

186	1033 00 tons
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Total number of boats, amount of tonnage passed the lock during the above period:

371 boats	4573 tons 18 cwt.
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THOMAS MCGAURAN, Collector.

CANAL STEAMBOAT.—A new steamboat called the Phenomenon, has been placed on the Erie Canal, to ply between Rochester, at which place she was wholly built, and Utica. She is so constructed that those on board can enjoy the benefits of walking on the outside, a few inches above the water, without the inconvenience of dodging a bridge every few moments. She has two commodious cabins, and is propelled at the rate of five miles an hour including lockages, by two wheels, at a moderate expense—the swell or wake is so trifling that it can be no objection to her travelling the canal.—[Sun.]

CANAL CELEBRATION.—The canal boat Northampton, with a delegation from this city, and a large number of citizens, started this morning from Hillhouse's Basin, for Northampton, in pursuance of an invitation from the citizens of that town, to celebrate the completion of the Hampshire and Hampden Canals, and their junction with the Connecticut river. The Governor of the State, Mr. Senator Smith, and other distinguished gentlemen, accompanied the party, which went off with streamers flying, a band of music, and hearts full of glorious anticipations. Success attend them!—[New Haven Herald.]

NEW FERRIES AND AVENUES.—It is with satisfaction, we observe that a new ferry to Long Island is about to be established, from the foot of 13th street, to North street in Williamsburg. The line across is almost a straight one, and the starting points on each side of the river, such as to accommodate a large population, both in the city and on Long Island. When is the contemplated ferry on the North river, from the foot of Amos street to Hoboken, to be established? It is much wanted for the accommodation of the upper part of the city.

A macadamized avenue on the west side of the city, similar to the Third avenue, so as to afford an equally convenient outlet to the residents in the 9th, 8th, 5th and 3d Wards, is also proposed, and will be, we hope, made forthwith. And this affords a fitting opportunity for repeating a question, frequently before asked in this paper, why ferries should not, equally with avenues, be established and kept up at the public expense, and free from toll? There is no distinction, that we can perceive, in principle, between facilitating access by land and access by water, to "the great city." We gain, by every obstacle removed on either element; and we do not see why—if roads are made and kept in repair out of the general funds, ferries should not in like manner be. At any rate, it certainly is inconsistent with common right, that monopolies in ferries should be created in behalf of private individuals, and that they should grow rich, enormously rich, as the lessees of the Fulton ferry have done, and are doing, out of the pockets of their fellow citizens,—every one of whom has a right—which the city of his residence ought to secure to him, as it does the lighting of the streets at night, the establishment of a watch, &c.—to go back and forth over the river, as on the road,—scot free.

We are aware that no such change can be effected during existing leases, on established ferries—but in reference to that one about to be established, from the foot of 13th street, and to the principle itself—our remarks are as well timed now as on any other occasion.—[N. Y. American.]

(From the London Penny Magazine.)

MR. JOHN LOMBE, AND THE SILK-THROWING MACHINERY AT DERBY.—The Lombes were originally manufacturers at Norwich, but removed to London, and became silk throwsters and merchants there. There were three brothers, Thomas, Henry, and John; the first was one of the sheriffs of London at the accession of George II. in 1727, on which occasion, according to custom, the chief magistrate was created a baronet, and Mr. Lombe was knighted. The second brother, who was of a melancholy temperament, put an end to his existence before those plans were developed which connected the name of Lombe with one of the most important manufactures of the country.

The Messrs. Lombes had a house at Leghorn under the firm of Glover & Unwin, who were their agents for purchasing the raw silk which the Italian peasantry sold at their markets and fairs to the merchants and factors. There were many other English houses at Leghorn, Turin, Ancona, and other parts of Italy, chiefly for exporting silk to England, in part return for which numerous cargoes of salt fish were and still are received from our ports for the consumption of the Italians during their Lent and other fasts. It was at that time customary for the English merchants engaged in the Italian trade to send their apprentices and sons to the Italian ports to complete their mercantile education, by acquainting themselves on the spot with the details of their peculiar line of business. It was professedly in compliance with this custom, but with a deeper ulterior view, that the youngest of the brothers, Mr. John Lombe, who at that time was little more than twenty years of age, proceeded to Leghorn in the year 1715.

The Italians had at that time become so much superior to the English in the art of throwing silk, in consequence of a new invention, that it was impossible for the latter to bring the article into the market on equal terms. This state of the trade induced the Lombes to consider by what means they might secure the same advantage which their improved machinery gave to the Italians; and the real view of the younger brother, in proceeding to Italy, was to endeavor to obtain such an acquaintance with the machinery as might enable him to introduce it into this country. The difficulties in the way of this undertaking were very great, and would have appeared insurmountable to any but a person of extraordinary courage and perseverance. We find these difficulties thus stated in the paper which Sir Thomas Lombe printed for distribution among the members when he applied to Parliament for the renewal of his patent. One at least of these printed papers has been preserved, and has been lent us for the present occasion. It is there said, that "the Italians having, by the most judicious and proper rules and regulations, advanced and supported the credit of the manufacture, have also, by the most severe laws, preserved the mys-

tery among themselves for a great number of years, to their inestimable advantage. As, for instance, the punishment prescribed by one of their laws for those who discover, or attempt to discover, any thing relating to this art, is death, with the forfeiture of all their goods, and to be afterwards painted on the outside of the prison walls, hanging to the gallows by one foot, with an inscription denoting the name and crime of the person; there to be continued for a perpetual mark of infamy."

The young Lombe, however, was not to be deterred by the danger and difficulty of the enterprise. On his arrival, and before he became known in the country, he went, accompanied by a friend, to see the Italian silk works. This was permitted under very rigid limitations. No person was admitted except when the machinery was in action, and even then he was hurried through the rooms with the most jealous precaution. The celerity of the machinery rendered it impossible for Mr. Lombe to comprehend all the dependencies and first springs of so extensive and complicated a work. He went with different persons in various habits, as a gentleman, a priest, or a lady, and he was very generous with his money; but he could never find an opportunity of seeing the machinery put in motion, or of giving to it that careful attention which his object required. Despairing of obtaining adequate information from such cursory inspection as he was thus enabled to give, he bethought himself of associating with the clergy, and being a man of letters, he succeeded in ingratiating himself with the priest who confessed the family to which the works belonged. He seems to have opened his plans, partly at least, to this person, and it is certain that he found means to obtain his co-operation. According to the scheme which they planned between them, Mr. Lombe disguised himself as a poor youth in want of employment. The priest then introduced him to the directors of the works, and gave him a good character for honesty and diligence, and described him as inured to greater hardships than might be expected from his appearance. He was accordingly engaged as a fillatœ-boy, to superintend a spinning engine so called. His mean appearance procured him accommodation in the place which his design made the most acceptable to him,—the mill. While others slept, he was awake, and diligently employed in his arduous and dangerous undertaking. He had possessed himself of a dark lantern, tinder box, wax candles, and a case of mathematical instruments: in the day time these were secreted in the hole under the stairs where he used to sleep; and no person ever indicated the least curiosity to ascertain the extent of the possessions of so mean a lad. He thus went on making drawings of every part of this grand and useful machinery; the priest often inquired after his poor boy at the works, and through his agency Lombe conveyed his drawings to Glover and Unwin; with them models were made from the draw-

ings, and dispatched to England piecemeal in bales of silk. These originals are still, we believe, preserved in the Derby mills.

After Lombe had completed his design, he still remained at the mill, waiting until an English ship should be on the point of sailing for England. When this happened, he left the works and hastened on board. But meanwhile his absence had occasioned suspicion, and an Italian brig was dispatched in pursuit; but the English vessel happily proved the better sailer of the two, and escaped. It is said that the priest was put to the torture; but the correspondent of the "Gentleman's Magazine," to which we are indebted for most of the facts we have stated, says that after Mr. Lombe's return to England, an Italian priest was much in his company; and he is of opinion that this was either the priest in question, or at least another confederate in the same affair. Mr. Lombe also brought over with him two natives accustomed to the manufacture, for the sake of introducing which he had incurred so much hazard.

After his return Mr. John Lombe appears to have actively exerted himself in forwarding the works undertaken by him and his brother, Sir Thomas, at Derby; but he did not live to witness their completion. He died on the premises, on the 16th of November, 1722, in the 29th year of his age. The common account of his death is, that the Italians, exasperated at the injury done to their trade, sent over to England an artful woman, who associated with the parties in the character of a friend; and having gained over one of the natives who originally accompanied Mr. Lombe, administered a poison to him of which he ultimately died.

We recur to Sir Thomas Lombe's statement, already quoted for the most authentic particulars respecting the progress of the work. The document itself is entitled, "A Brief State of the Case relating to the machine erected at Derby, for making Italian Organzine Silk, which was discovered and brought into England with the utmost difficulty and hazard, and at the sole expense of Sir Thos. Lombe." It commences with stating the capabilities of the machine. "This machine performs the work of making Italian organzine silk, which is a manufacture made out of fine raw silk, by reducing it to a hard twisted, fine, and even thread. This silk makes the warp, and is absolutely necessary to mix with and cover the Turkey and other coarser silks thrown here, which are used for shute; so that without a constant supply of this fine Italian organzine silk, very little of the said Turkey and other silks could be used, nor could the silk-weaving trade be carried on in England. This Italian organzine (or thrown) silk has in all times past been bought with our money, ready made (or worked) in Italy, for want of the art of making it here; whereas now, by working it ourselves out of fine Italian raw silk, the nation saves nearly one third part; and by what we make out of fine

China raw silk, above one half of the price we pay for it ready worked in Italy." The paper goes on to state, that "the machine at Derby has 97,746 wheels, movements, and individual parts, (which work day and night,) all which receive their motion from one large water wheel, and are governed by one regulator; and it employs 300 persons to attend and supply it with work." After stating the difficulties which had been surmounted in introducing this improvement, the paper thus concludes: "Upon the introduction of which [this improvement], his late most gracious Majesty granted a patent to the said Sir Thomas Lombe, for the sole making and use of the said engines in England, for the term of fourteen years. Upon which he set about the work and raised a large pile of building upon the river Derwent at Derby, and therein erected the said machine; but before the whole could be completed, several years of the said term were expired. Then the King of Sardinia, in whose country we buy the greater part of our supply of organzine silk, being informed of his success, prohibited the exportation of Piedmontese raw silk; so that before the said Sir Thos. Lombe could provide a full supply of other raw silk proper for his purpose, alter his engine, train up a sufficient number of work-folk, and bring the manufacture to perfection, almost the whole of the said fourteen years were run out. Therefore, as he has not hitherto received the intended benefit of the aforesaid patent, and in consideration of the extraordinary nature of his undertaking, the very great expense, hazard, and difficulty, he has undergone, as well as the advantage he has hereby procured to the nation at his own expense, the said Sir Thomas Lombe humbly hopes the parliament will grant him a further term for the sole making and using his engines, or such other recompense as in their great wisdom shall seem meet."

The Parliament considering the matter of much public importance, thought it best to give him a grant of £14,000, on condition that the invention should be thrown open to the trade, and that a model of the machine should be deposited in the Tower of London for public inspection. It is commonly stated that Parliament refused to extend the patent, and granted the money to soften their refusal; but we have seen that Sir Thomas himself suggested some "other recompense" than an extended patent as an alternative. In the course of time similar mills began to be erected in different parts of the country; but in consequence of the difficulties that were experienced in procuring Italian raw silk of the proper size for organzine, (the exportation of which was prohibited by the Italians,) and also because the mills happened subsequently to find employment for other purposes, the quantity worked into organzine, in this country, bore for many years no proportion to the imports from Italy. The manufacture has, however, been since revived and improved. In consequence of which it is now car-

ried on to a very considerable extent, not only in Derby, but in other parts of the country.

The mill erected by Sir Thos. Lombe stands upon an island, or rather swamp, in the Derwent, about 500 feet long and 52 wide. The building stands upon huge piles of oak, double planked, and covered with stone-work, on which are turned thirteen stone arches, that sustain the walls. Its length is 110 feet, its breadth 39, and its height 55 feet. It contains five stories. In the three upper are the Italian winding engines, which are placed in a regular manner across the apartments, and furnished with many thousand swifts and spindles, and engines for working them. In the two lower floors are the spinning and twist mills, which are all of a circular form, and are turned by upright shafts passing through their centres and communicating with shafts from the water wheel. The spinning mills are eight in number, and give motion to upwards of 25,000 reel-bobbins, and nearly 3000 star-wheels belonging to the reels. Each of the four twist mills contains four rounds of spindles, about 389 of which are connected with each mill, as well as numerous reels, bobbins, star-wheels, &c. The whole of this elaborate machine, though distributed through so many apartments, is put in motion by a single water wheel, twenty-three feet in diameter, situated on the west side of the building. All the operations, from winding the raw silk to organizing or preparing it for the weavers, are performed here. The raw silk is chiefly brought in skeins or hanks from China and Piedmont. The skein is, in the first instance, placed on a hexagonal wheel, or swift, and the filaments which compose it are regularly wound off upon a small cylindrical block of wood, or bobbin. It is the work of five or six days to wind a single skein, though the machine be kept in motion for ten hours daily, on account of the amazing fineness of the filaments of which it consists. The silk, when thus wound off upon the bobbins, is afterwards twisted by other parts of the machinery, and is then sent to the *doublers*, who are chiefly women stationed in a detached building. Here four, seven, or ten threads, are twisted into one, according to its intended size, the fine kind going to the stocking weavers, and the others to different manufacturers. Other mills erected more recently at Derby, on a similar principle, greatly surpass this in their machinery, and efficiency; but the old mill must continue to be regarded with peculiar interest, as the first establishment of the kind erected in this country.

MINERAL KINGDOM. Gold.—This metal possesses above all others the qualities of utility and beauty, without any deleterious property. It has been in all times regarded as the most perfect and most precious of the metals, and among the more civilized nations has been the standard of value for other commodities. Its peculiar rich hue is well known; and it is the only metal of a yellow color. In its pure state it is as

soft as tin, and is very flexible, but it is capable of receiving a high lustre by polishing with a burnisher, although inferior in brilliancy to steel, silver, and mercury. It possesses little elasticity or sonorousness. Its specific gravity is 19.30—that is, it is more than nineteen times heavier than water, bulk for bulk. In *malleability* it exceeds all other metals; for one grain of it can be beat out into a leaf so thin as not to exceed $\frac{1}{1000}$ th part of an inch in thickness, and which will cover fifty-six square inches; in this state, notwithstanding the high specific gravity, it will float in the air like a feather. But even that is not the extreme limit to which it is capable of being extended; for a coating of gold, which is calculated to be only one-twelfth part of the above thickness, is produced by another process: if a silver wire be covered with gold, it may be drawn out into wire of still greater fineness, and retain a coating of gold; and one grain of gold will in this way coat a surface of wire about two miles and three-quarters in length. In *ductility* it also exceeds all other metals; that is, it can be drawn into finer wire than any other. In *tenacity*, however, it is greatly inferior, standing only fifth in order, in respect of that property when compared with other metals: a wire $\frac{1}{32}$ th of an inch in thickness will not support a greater weight than 150 lbs., whereas iron wire of the same diameter will sustain a weight of 550 lbs. without breaking. It is not a perfectly opaque body like all the other metals, for gold leaf transmits a green light; as may be conveniently observed by laying a leaf between two thin plates of colorless glass, and holding it between the eye and a strong light. It is less fusible than silver, and more so than copper: Mr. Daniel estimates its melting point to be at a heat equal to 2016° of Fahrenheit's scale. It is the most perfect of all conductors of heat; that is to say, if heat be applied to one end of a rod of gold, it will be transmitted from particle to particle, and become sensible at the other extremity of the rod more quickly than through any other substance in nature. Thus while the conducting power of a rod of porcelain is represented by a velocity of 12, of lead by 179, of iron by 374, the velocity of gold is 1000. Gold may be exposed for ages to air and moisture without undergoing any alteration; and a quantity of it has been kept for thirty weeks in a melted state in a glass-house furnace without the loss of a single grain, and without any change in its nature. But if a small portion of it be intensely heated by electricity, or by the oxy-hydrogen blow-pipe, it burns with a greenish blue flame, and is dissipated in the form of a purple powder.

Gold is found, almost universally, in the native or metallic state; but it is seldom quite pure, being generally alloyed, in greater or less degree, with other metals, and usually with silver, copper, or iron. The Prussian chemist, Klaproth, found a native gold from the Altai Mountains to contain as much as 36 per cent. of silver; and Professor G. Rose, of Berlin, by more recent analysis, has found a specimen from the same district to contain 38 per cent., and another from Hungary nearly 39 per cent. He found the gold of the Ural Mountains to contain from 2 to 15 per cent. in general; but one variety so free from foreign admixture as to contain nearly 99 per cent. of pure gold. Boussingault has found the native gold of Colombia to contain from 2 to 36 per cent. of silver. It is found in veins in the primary and older sedimentary rocks, and also in the unstratified rocks that are associated with these, such as granite,

porphyry, and hornblende rock; and sometimes, also, in the more ancient of the secondary strata. The veinstone in which the gold occurs is most generally quartz. In Transylvania small quantities of an ore have been found, in which gold is in combination with a considerable proportion of the rare metal *Tellurium*; and there is a kind of iron pyrites—that is, a sulphuret of iron,—not of very unfrequent occurrence, which contains minute scales of pure gold interposed between the laminae of the pyrites. When gold occurs in veins in solid rocks, it is sometimes regularly crystallized. In the splendid collection of minerals belonging to the Russian noble, Prince Demidoff, there are many beautiful crystals of gold from the Ural Mountains. By far the greatest proportion of this metal, in all countries which produce it, is obtained from alluvial soils, or deposits, where the gold is found in scales, grains, and lumps, rounded by attrition: so that the metal has evidently been derived from pre-existing rocks, in which it was disseminated either in minute scales or veins, and which have been broken up; the fragments having been abraded by the action of water in the same manner as the pebbles of tin-stone in the stream-works of Cornwall, and other places. For the sake of convenience, we shall call this “stream-gold.” It is found in the sand and gravel of the beds of many rivers and smaller streams in most countries of the world; but the chief quantity is met with in extensive alluvial deposits, formed by other aqueous causes than the water of existing rivers. The lumps of gold, in such situations, are of very various sizes; and masses have been found in the Ural Mountains of eighteen and twenty pounds weight,—in Colombia, of twenty-five pounds; and one is said to have been found near La Paz, in Peru, of nearly forty-five pounds weight, the value of which, if estimated at 3*l.* 10*s.* per ounce, would be 1890*l.* A considerable portion of stream-gold appears to have been derived from auriferous pyrites; for almost all the sands from which this metal is gathered are of a deep blackish-brown color, and are highly ferruginous. It is a remarkable and not a very explicable circumstance that, in countries which contain deposits of alluvium rich in gold, and the materials of which must have been derived from rocks at no very great distance, it has rarely happened that the attempts to find the metal in the neighboring rocks have been successful. It may be asked, how gold comes to be so often found in alluvial soils, and that other metals should not be met with in the same way? Platinum is so found, and so is silver, but only very rarely. The reason is, that the ores of other metals are liable to decomposition by exposure to air and moisture; and, therefore, although they might have been originally in fragments, like the other materials of the rocks that were broken up, they would gradually disappear by decomposition; whereas the gold, from its indestructible nature, remains unchanged, except in form. In the same way stream-tin has been preserved, because the oxide of tin is not affected by air and moisture.

To describe the methods employed to separate gold from the other minerals with which it is combined would lead us into somewhat tedious details. The great value of gold makes searching after minute quantities profitable, which would never be practised with other metals. The usual mode of separation is by a process called *amalgamation*, which is founded on the property which mercury (or quicksilver)

has of combining very readily with gold, and of being easily separated from it again by the application of heat. The etymology of the word is Greek, viz., *ama*, together, and *gameo*, to marry; expressive in this way of the union of the gold with the quicksilver. Amalgamation is effected in this manner: the ore, broken to pieces and freed as much as possible from stony impurities, is reduced to powder, and made up into a paste with salt and water. Quicksilver in proper proportion is added, and the whole is well beaten and shaken together, and kept at the temperature of boiling water for some days, till the union is effected; after which the earthy matter is washed away, and the residue is subjected to distillation, by which the quicksilver is separated, and at the same time recovered in great part, and the gold, usually containing a little silver, is left behind. This is the usual process followed in Mexico and South America. In Hungary the gold is generally purified by another process, called *cupellation*. This depends on the property which lead and copper, the metals with which the gold is there mixed in the ores, have of attracting oxygen from the air when exposed to a strong heat, and which the gold does not. The ores are well roasted, to drive off the sulphur they usually contain, and are fused in several successive operations. The metallic mixture, freed from stony matter thus obtained, is put into a vessel made of bone-ashes, called a *cupel*; it is made of that material because it forms a porous texture, and is, at the same time, very refractory in the fire. A strong blast of intensely-heated air is now made to pass over the metal in a state of fusion, and the lead and copper becoming oxidated, are absorbed by the cupel, or skimmed off, and the gold is left behind. The lead is the great agent, for its oxide is easily fusible into a glassy substance, which sinks into the cupel, carrying the other impurities along with it; so that if the ore does not naturally contain much lead, a portion is added. We have described these processes only very generally: there are many delicate manipulations in the mode of conducting them, upon which success in the result greatly depends.

In our next section we shall proceed to describe the principal sources from which gold is derived. The ‘*Historical Inquiry into the Production and Consumption of the Precious Metals*,’ by William Jacob, Esq., may be consulted with advantage by those who are desirous of minute information; and we have ourselves relied upon it for many of the facts contained in the following sections.

SILVERSMITH'S PORTABLE FORGE.—

We were much pleased with the examination, at the machine shop of Mr. G. N. Miner, No. 30 Gold street, of a *Portable Forge* for the use of jewellers and others who require a small manageable fire. It consists, first, of a cast iron fireplace, much resembling a Franklin stove, with a pot, about the size and shape of the crown of an old-fashioned quaker hat, inverted, and attached to the bottom of the hearth of the stove, into which is inserted a tin air pipe, leading from the bellows, contained in a box of 37 inches long, 24 inches wide, and 16 inches deep, upon the top of which the forge or stove stands, occupying very little space, and it may be moved by one man to any part of the shop. The bellows is put in motion by the foot of the man who uses

the forge. This very convenient apparatus was invented, we are informed, by Mr. _____, of Peekskill, Westchester county, New-York, and one of them may be examined at No. 30 Gold street, to which we would call attention.

SPEEDWELL IRON WORKS.—Speedwell is a small village situated on the Whippany river, about one mile from the pleasant town of Morris, Morris county, N. J., and celebrated for its manufactories of machinery. Located as it is in the very heart of an iron region, and supplied with an unfailing water power, it has advantages for the making of machinery which few works possess. They have been in operation thirty years, and have acquired, from the superior quality of the work, in strength, durability, and finish, extensive patronage and celebrity. The enterprising and intelligent proprietors, S. VAIL & SON, having gradually enlarged the works from their commencement, and improved the machinery as the times demanded, have spared no pains in providing the manufactories with every kind of apparatus which is necessary for the execution of the most difficult pieces of work, and with the greatest care and dispatch. At present the works consist of several shops, in which machinery in its various stages is made. The first is the forging department, where, by peculiar facilities and helps, afforded by the locality of the establishment, its water power, driving a trip hammer and also a pair of bellows, supplying all the fires with wind, its cranes and railways, is made the heaviest and most unyielding pieces of machinery. The next branch is its finishing departments, which are three. Every advantage is also here taken of its water power, and its apparatus for finishing is simple and effective. It has also a brass-foundry, and an iron-foundry erecting, a factory for spinning cotton not yet finished, a sash factory in full operation, where the mortices, tenons, &c. are made by machinery, and a saw-mill. The village is quite romantic, and its scenery enchanting—surrounded on every side by steep and high hills, overlooking the busy scenes below, and the spacious lake which spreads before the eye in beauty, embosomed between two large hills, whose verdant and woody sides slope to the water's edge.

Visit to the Messrs. Reynolds' Establishment at Kinderhook, New-York.

To the Editor of the *Mechanics' Magazine*:

Sir,—As my entire mental constitution is so completely tuned, and adapted to mechanical operations, that I should almost take pleasure in being ground up in any establishment which consisted chiefly of machinery, you would naturally expect to find me visiting and reconnoitring and examining and philosophizing upon, in mass and in detail, every mechanical, and especially every machine using establishment, which comes in my way; or rather which I come in the way of, even if I have to go considerably out of my way to do it.

In one of these reconnoitring excursions, which I lately made to that part of the town of Kinderhook, distinguished in the Golden Knickerbocker day by the cognomen of Valatie, partly to examine the progress of mechanical improvements there and partly to visit my friends, the Reynoldses, of that place—for I scarcely need tell you that every man who excels in nice mechanical operations is my friend, or, at any rate, I am his—I saw some improvements which I think ought to be duly noticed in your useful Magazine.

But before going into the detail of of those improvements, I hope my said friends will pardon the liberty I take, in offering you some remarks on the persons by whom the improvements have been made. They are three brothers, who appear, at least to me, to possess in an uncommon share that kind of native intellect which, when properly cultivated, becomes what is commonly called mechanical ingenuity. They are yet in early life, and have served regular apprenticeships at those branches of business, which, when combined together, embrace all the operations of machine making. They are united together, not only by the strongest tie of consanguinity, but by a congeniality of mind rarely to be met with in three members of the same family. They have, from the earliest periods of their apprenticeships, devoted their leisure hours industriously to the acquirement of such branches of science as might aid them in future business; and the joint result of their studies amounts, I should think, to a stock of mechanical science, perhaps not surpassed, if equalled, in any other establishment of the kind in this country. As their seasons for study must have been limited, it would seem they have so managed their subjects that, whenever one is at a loss, another is ready to prompt him. By the joint avails of their industry, previously to their uniting, they had acquired the pecuniary means of procuring an excellent water privilege, erecting shops, &c., to make a very respectable beginning. Every article in their shops exhibits a degree of skill in plan and arrangement, and of taste and neatness of workmanship, which are of the highest order. I am confident the most competent judge would, upon critical examination, pronounce their establishment an honor to themselves and the country.

But to return to the improvements.

The first which attracted my notice is a saw-mill, on a scale about half the size of the common saw-mill, but which may be as suitably applied to use on one scale as another. I think any person with a mechanical eye, who sees it, will concede that the propelling power necessary for a saw-mill of the common form and size, with one saw, would on this plan drive four of the same size. I will endeavor to give you a brief description, together with a diagram, which will, I think, make it clearly understood.

The saws are held and operated by

two balance beams or walking beams, similar to those used in the common steam engine. These beams are placed horizontally one above the other, exactly parallel, and their distance from each other about twice the length of the saw, more or less. Each beam is supported in the middle by a strong fulcrum or axis, resting on its pivots or bearings; which pivots or bearings are supported in the following manner.

The bearings of the lower axis rest upon strong side timbers of an oblong frame, about half way from the bottom to top, which frame is to sustain on its top the carriage and log or other timber to be sawed, with the necessary apparatus and fixtures for fastening the log, and moving it forward against the saw.

The axis of the upper beam is supported in proper boxes in two hangers or timbers, projecting downward from the framework of the building above, and must of course be securely braced.

On each end of each of these beams is a segment of a circle, the radius of which is exactly half the length of the beams; and each segment will contain about 70 or 80 degrees of a circle, more or less. Each segment has a flat steel spring, about the length of the periphery of the segment, and as wide as the thickness of the same, and the thickness of the springs about one-third or one-half that of the saw. One end of each of these springs is attached to the outer end of one of the segments, that is, to the lower end of the lower segments and to the upper end of the upper segments. The faces of the segments being made smooth, the springs will, of course, when bent to them, lie flat.

It will be readily perceived, that if the inner or approximate ends of the springs at each end of each beam, that is, a top spring and a bottom spring at each end of the beams, were connected together, in any manner so as to draw them tight, and the beams were, at the same time, placed in a parallel and horizontal position, the string, or whatever connected the top and bottom beams, with their respective springs, together, would make part of a tangent line from the centre of one segment to the centre of the other. When the beams are thus placed, if the ends are moved alternately up and down, the lines of connection between the top and bottom beams and segments will move exactly up and down, without any lateral motion whatever. If, then, these two connecting lines consist of two saws, attached to the aforesaid springs, the saws will move up and down as accurately as if carried up and down with a saw-gate, and perhaps more so. And if the power of a crank motion be applied to the centre end of either of the segments, both saws will be put in operation, one going up as the other goes down, and vice versa.

These saws may stand with their teeth in any direction, either to cut parallel with the beams or at right or any other angle. We have then two complete saw-mills, operated by the same power

which would operate one; and a gang of any number of saws may be operated in the same manner. If, however, the saws are set so as to cut parallel with the beams, one saw will interfere with the other; it will be necessary therefore to have the saws cut at right angles with the beams, and then, of course, the two logs can move parallel with each other.

By this plan, the weight necessarily moved up and down with the saws will be but a small part of the weight of the common saw-gate, and one saw completely balances the other, so that the power of a child will give the saws the necessary motion, except the resistance produced by cutting.

As the moving the log and other subservient operations may be effected as in the common saw-mill, no description is therefore necessary. The diagram will show the mode of hanging and operating the saw, which forms the basis of the improvement.

Several other improvements found in the same establishment will be noticed hereafter. S. B.

[From the London Mechanics' Magazine.]

STEREOTYPE SUBSTITUTES.

SIR,—A writer in your Monthly Part for January, alludes to the probability of an invention by which the letters may be transferred from printed books to a kind of stereotype plates, by which copies may be infinitely multiplied, without a new composition or re-setting of types. Chemistry will no doubt add this to the numerous obligations it has already conferred upon the world; and the printing once transferred, the Chinese, or indeed the lithographic printing, may satisfy us, that the letters will be sufficiently in relief. The letter of your correspondent has suggested to me a question, whether lithography does not already supply us with a cheap mode of preserving a fac-simile copy of any types which have once appeared in the page of the printing compositor? What objection would there be to keep a copy of any printed page on transfer paper? Letter-press printing has long been successfully transferred to the lithographic stone, and if the copy taken off on transfer paper would keep for any length of time, we might, at very trifling expense, produce a few copies of a work, whenever they were wanted. I hope some of your scientific readers, who have made chemistry their study, will be so obliging as to solve this question: whether a copy made on transfer paper will keep for any length of time without being decomposed? In many cases the benefit to the literary world would be very great, from having the means of keeping (and renewing) a copy of a printed page, for immediate use, as type, in a space scarcely greater than that occupied by a printed book, and from it to have the power of producing copies at an expense not worth any consideration, when compared with the cost of re-setting the press. I am, &c. B. S.

NEW-YORK AMERICAN.

JULY 25-31, 1835.

LITERARY NOTICES.

ANNE GREY. A Novel. Edited by the author of *Grandy*. 2 vols. CAREY, LEA & BLANCHARD. —An agreeable and sprightly novel—evidently and unmistakably from a female pen, and developing, in the person of the heroine, ANNE GREY, one of the sweetest female characters imaginable—a character, not of striking contrasts, nor of any of the ordinary marvellous qualities of professed heroines, but such, as a fine temper, good example, and a well cultivated heart, as well as understanding, may contribute to form at any time. The cousin's character, however—though necessary to the story, which could not get along without her evil machinations—is an incredible exaggeration.

THE GIPSY, a Tale by the author of *Richelieu*, *Mary of Burgundy*, &c., 2 vols. New York, HARPER & BROTHERS.—To say that this is a tale of power, is only what might be expected, after designating the author; but to say that it will add to the fame of him who wrote *Richelieu*, and *Mary of Burgundy*, is what our literary conscience will not permit us to do. We were disappointed in the work—both as to interest and execution—there is too much diffuseness, too decided a purpose to spin it out, to the required number of pages, and to cram the ever craving maw that cries "copy, copy, more copy." But it is, nevertheless, a tale that will be read.

THE LIFE OF EDMOND KEAN; 1 vol., New York, HARPER & BROTHERS.—A player's life should, on the Shakespearian dictum that "all the world's a stage," be a sort of epitome of humanity under all its varying phases. And so we suppose it is—at any rate the biographies or personal memoirs of players, when executed with any degree of talent, have always been popular reading.

The author of this book—though it appears anonymously, is stated to be *Barry Cornwall*.—Whoever he be, he has executed his task in an attractive manner, and one removed, in the farthest degree possible, from that of mere book-making—for, doubtless, the materials under his hands, but for judicious compression, might easily have been swelled to volumes as thick and dull, as *Boaden's Life of Kemble*.

THE GENTLEMAN'S POCKET FARRIER, &c. &c. By F. TUFFNELL. N. Y.—Office of the *N. York Farmer*, and T. & C. WOOD.—We like this convenient little manual. It goes into the pocket, and has, as it seems to us, receipts—and we dare say they are good ones, since they are said to be founded on many years' experience—for all the accidents of lameness, galls, &c. to which horses are liable on a journey.

[From the *London Athenæum*, of June 13th.]

Personal Recollections of the late Mrs. Hemans.*

There are few cases in which delicacy and feeling are more entirely tested, than when the surviving friends of those who were gifted and celebrated while on earth, are called upon to determine in

* Perhaps this is a proper place to advert to a correction of a fact in our obituary notice of Mrs. Hemans, which has appeared, it is said, on authority, in the *Liverpool Standard*. She is there stated to have been born in Duke street, and not in St. Anne street. As an exact fact thus published, we can have no hesitation in submitting to correction. The same paragraph, however, contains a notice of her domestic life, equally ill-considered and incorrect: it is a wrong, both to the dead and the living, to mistake occurrences, about which there can be no mistake.

what time and in what measure some account may be offered to the public of their personal history and private character. Such, at least, is my feelings, in attempting to collect my remembrances of my deceased friend, Mrs. Hemans. I am afraid of saying too much, lest I be thought premature and unfeeling, in thus minutely dwelling upon the manners and habits of one scarcely cold in her grave. I am afraid of saying too little, lest those who knew her less, should think it requisite to complete the picture, by additions which bear little resemblance to the original. Had I merely consulted my own inclinations, the following notices would have been deferred some time; for who is there that can turn over the pages of his memory to seek for relics and memorials for those who have recently passed away, without a feeling of disinclination to produce such feelings, to the gaze and criticism of the public?

When I first became acquainted with Mrs. Hemans, her fame was at its brightest, and her lyrics published in the different periodicals—her "Forest Sanctuary," and above all her "Records of Woman," (probably from the happy choice of its subjects) had not only raised her name high in the estimation of all classes of readers, but had excited considerable curiosity, and I really believe genuine interest, as to the person and fortunes of the writer. She was, however, unknown, save to a small and select circle of friends—some spoke of her as an old and experienced verse-wright, some, remembering her juvenile poems, and forgetting that Time had since been at work for some fifteen years or more, described her as still very young and very beautiful—she was almost canonized by the serious; her claim to something more than ephemeral reputation of a young lady writer, was admitted by stern critics; in short, within two years,—dating from the publication of her "Siege of Valencia,"—she had taken a permanent place in the republic of letters; and it was natural that the world, always preferring the peep behind the curtain, to the finest acted nature before it, should express great anxiety and solicitude to know "what she was like."

At this time, then, the death of her mother, and the marriage of her sister, were the cause of Mrs. Hemans' breaking up her establishment in Wales, and taking up her residence at Wavertree, a pleasant village about three miles from Liverpool. She had made choice of this situation for her sons, and cultivated society for herself. But the mistake she made in thus choosing, was a great one; Liverpool was then singularly deficient in good schools, and its society was too much broken up into small circles, too completely under the dominion of a money aristocracy, to offer much that was congenial to her own tastes and pursuits. She was too imaginative and fanciful to be thoroughly understood by that party to which Roscoe and Currie had formerly belonged; they found that the brilliant things which she threw out, the spontaneous overthrows of her peculiar mind, "proved nothing; and they did not perceive the elevation of thought, and the frequent religious feeling which also formed a part of her character. The less intelligent, who discovered that she did not enjoy dinners, balls, and concerts, after their fashion—and there is no code so arbitrary as the statute of manners in a provincial town—who remarked one or two singularities in her dress, and were frightened by her allusions to things and feelings of which they knew nothing, kept aloof from her, with suspicion and uneasiness.

I mention these things, neither in reproach nor derision—they are the natural and inevitable conditions of a society so constituted as the society of Liverpool—but simply as accounting for the manner in which Mrs. Hemans held herself in comparative retirement, and confined her intercourse (willingly given) to a very few. She had never learned the failings and prettinesses of the world's manners; nor, on the other hand, did she find it agreeable always to sit upon her throne, as it were, with her book of magic upon her knee, and her conjuring wand in her outstretched arm. Her humor was sprightly and searching, as well as original; she could talk delicious nonsense, as well as inspired sense; and the utilitarian and the serious, who would fain have had a moral placarded and paraded upon every chance phrase of conversation, "wondered and went their way." At this time she was sought out in her retreat by every species of literary homage, from every corner of England and America; gifts, offers of service, letters of introduction crowded upon her:—literary engagements were pressed upon her, from the divinity

treatise to the fairy tale, which she simply evaded by pursuing her own way; and yet she was never so delightful, never so happy, as when she could come in, like an inmate, to the firesides of the few who understood her—at times making most pleasant merriment of the notoriety of her lot; at times, when graver subjects were touched upon, rising to a lofty and glowing eloquence, which I have seldom heard reached, certainly never surpassed.

The house which Mrs. Hemans occupied was too small to deserve the name; the third of a cluster or row, close to a dusty road—and yet too townish in appearance and situation to be called a cottage. It was set in a small court, and within was gloomy and comfortless; its parlors being little larger than closets: and yet she threw something of her own spirit round her, even in so unpromising an abode,—and with her books, and her harp, and the flowers which sometimes half filled her little rooms, they presently assumed a habitable, almost an elegant appearance. Sometimes, indeed, the scene was varied by odd presents, literary and others. I remember once paying her a visit, when a persevering writer, personally unknown to her, had sent her a hundred sonnets, printed on separate slips of paper, for inspection and approval; these had not yet been consigned to the "chaos drawer," as she used to call it, from which many a precious piece of folly and flattery might have been disinterred for the amusement of the public; and as the day was windy, and the window chanced to be open, this century of choice things, was flying hither and thither, much to our amusement—a miniature snow storm, chased by her boys with as much glee as if they had been butterfly hunting. Scarcely had she settled herself at Wavertree, than she was besieged by visitors, to a number positively bewildering; a more heterogeneous company cannot be imagined. Many came merely to stare at the strange poetess,—others to pay proper neighborly morning calls, and these were surprised to find that she was not ready with an answer, when the talk was of housekeeping and like matters. Others, and these were the worst, brought in their hands small cargoes of cut-and-dry compliments, and as she used to declare, had primed themselves for their visit by getting up a certain number of her poems. Small satisfaction had they in their visits; they found a lady neither short nor tall; though far from middle age, no longer youthful or beautiful in her appearance, (her hair, however, of the true auburn tinge, was as silken, and as profuse and curling as it had ever been;) with manners quiet and refined, a little reserved and uncommunicative, one, too, who lent no ear to the news of the day—

Who gave the ball, and paid the visit last.

The ladies, however, when they went away, had to tell: that her room was in a sad litter with books and papers, that the strings of her harp were half of them broken, and that she wore a veil on her head like no one else. Nor did the gentlemen make much way by their Della Cruscan admiration; in fact, the stock of compliment, once being exhausted, there remained nothing to be said on either side: though there were none more frankly delighted, or more keenly sensible of the genuine pleasure she gave by her writings than Mrs. Hemans. Her works were a part of herself, herself of them; and those who enjoyed and understood the one, enjoyed and understood the other, and made their way at once to her heart. I must not forget to allude to what Charles Lamb calls the "albumean persecution" which she was called upon to endure. People not only brought their own books, but those of "sister and my sister's child," all anxious to have something written on purpose for themselves. One gentleman, a total stranger to her, beset her before (as the housewives say) "she was fairly settled," with a huge virgin folio splendidly bound: which he had bought on purpose "that she might open it with one of her exquisite poems." On the whole she bore her honors meekly, and for a while in the natural kindness of her heart, gave way to the current, wishing to oblige every one. Sometimes, however, her sense of the whimsical would break out; sometimes it was provoked by the thorough-going and coarse perseverance of the intrusions, against which it was difficult to guard. What could be done with persons who called thrice in one morning, and refused to take their final departure till they were told "when Mrs. Hemans would be at home?" It was on one of these occasions, that she commissioned a friend

of hers, in a lovely note, to procure her "a dragon to be kept in her court-yard." At another time (and that I well remember was a flagrant case,) her vexation worked itself off in a no less cheerful manner:

"They had an album with them, absolutely an album! You had scarcely left me to my fate—oh! how you laughed the moment you were free!—when the little woman with the inquisitorial eyes, informed me that the tall woman with the superior understanding—Heaven save the mark!—was ambitious of possessing my autograph—and out 'leaped in lightning forth'—the album. A most evangelical and edifying book it is truly; so I, out of pure spleen, mean to insert in it something as strongly savoring of the Pagan miscellany as I dare. Oh! the 'pleasures of fame!' Oh! that I were but a little girl in the top of the elm tree again! Your witch enduring F. H."

I cannot give this, and the following fragments selected from a mass of correspondence, with the different members of a family circle, without simply desiring the reader to remember that all of them were notes written—for such was her nature—from the impulse of the moment, during a period of unbroken intercourse and confidence. The graver as well as the gayer passages they contain, are so entirely characteristic, that I have not thought it right to withhold them altogether; though some may be so wound up with the less important personal interests and feelings of those whom she addressed, as not to be separable from them. All that was possible, however, has been detached, and, in so doing, I have sacrificed, with regret, much that is brilliant and striking, and speaks of and to the heart.

Besides all these home troubles, were the visits of strangers, not "angels' visits, few and far between"—from east and west, and north and south, they came—not a few from America. The admiration entertained by the Americans for her genius is as sincere as it is creditable to themselves. I remember seeing a beautiful girl from New York town, quite pale with excitement at the thoughts of being presented to the poetess. "Her friends at home," she said, "would think so much of her, if she could only say she had seen Mrs. Hemans." Another lady, of stouter fibre, also from across the Atlantic, came sturdily upon her, with a box full of family portraits in her hand, and a mouth full of the oddest protestations of regard possible, and, on taking leave of Mrs. Hemans, remonstrated with her on the melancholy tone of her poetry in general, and entreated to be allowed to introduce a friend of her own, whom she might lean upon "as a perfect walking-stick of friendship," under which happy support, she prophesied that her verses would presently become cheerful—and the gentleman was "long, and lank, and brown," and suitable to the simile. These were mere acquaintances of the hour; but, among her visitors from far-away places, came friends too, and when I remember the evenings I have passed in her little parlor, with herself and Miss Jewsbury, (alas! too early called away!) and Mary Howitt, and Dr. Bowring, and others, I cannot but regret that I have no more specific record of the conversation, which was struck out in this encounter of minds of no common order. It was varied and sparkling, and suggestive beyond most that I have since heard. The two following notes refer to this period—the second to a cruel murder perpetrated upon that fine but most extravagant poem of Shelly's, 'Mary Anne's Dream,' which a gentleman had insisted upon reading aloud, much in "Eccles' vein":—

"Thank you for your very kind note: I was much better when it arrived, but did not feel the less gratified by all the cordial kindness of its expressions. My complaint is, indeed, most pertinacious, if not hopeless, as I am assured, and indeed convinced, that it is caused by excitements, from which, unless I could win "the wings of a dove and flee away" into a calmer atmosphere, I have no chance of escaping. I have, therefore, only to meet it as cheerily as I may—and there is a buoyant spirit yet unconquered, though often sorely shaken within me.

"Do you know that I have really succeeded in giving some thing of beauty to the suburban court of my dwelling, by the aid of the laburnums and rhododendrons, which I planted myself, and which I want you to see whilst they are so amiably flowering. But how soon the feeling of home throws light and loveliness over the most uninteresting spot. I am beginning to draw that feeling around me here, and consequently to be happier.

"Did you ever see a letter with a symphony? I

call the enclosed one of that class. After many and long wanderings it reached me this morning with that awful Titanic poem, the —; the sight of which really renews all the terrors of 'Charlemagne.' The opening of Mr. —'s letter strikes me as being so very original, that I send it for your edification."

"I fear you were very unwell the other evening, or did you run away so early, to escape the infliction of another 'Dream?' I was quite afraid of looking at you, lest I should have laughed. I had such a levee, yesterday morning, I was as much inclined to run away from all, as from Bishop and Dean, and sofa-table, and Chinese puzzles of old. — and — called upon me—what a butyraceous looking pair they are! Something was said of Montgomery's 'Pelican Island,' and with your comparison of the penguin, and my Welsh recollections full in my head, I had the narrowest escape possible of calling it 'Puffin Island.' How do poets contrive to grow so fat? I suppose it is only translators who can do so, and what the country people call 'nice quiet gentlemen' poets. However, I liked them both, they looked so extremely comfortable."

"I send you the Moravian air, and this is the old Swedish tradition of which I was speaking to you last night, when the public entered and interrupted me. There is a dark lake somewhere among the Swedish mountains—and in the lake there is an island of pines—and on the island an old castle—and there is a spirit harper who lives far down in the lake and when any evil is going to befall the inhabitants of the castle, he rises to the surface, and plays a most mournful ditty on the shadowy heart, and they know that it is a music of warning. I met with it in "Olaus Magnus," such a strange wild old book; did you ever read it?"

These last notes are further interesting, as showing what may be well called "the rainbow hue" of the poet's mind, how near to each other dwell its livelier and its deeper feelings. But the world in general is singularly unwilling to admit this double power and I have often thought that a fear of its censure which Mrs. Hemans confined herself—though and remark, narrowed the class of subjects to again it may be said, that she never wrote save when in earnest, and that the lonely and prevailing thoughts of her mind, (I speak of it in a comparative calmness—there were times when they were of a much sadder hue), were of that lofty, and noble, and chivalresque character, which speaks out in her poetry; something of this will be seen in further selections from her letters, which I shall give.

It was during Mrs. Hemans's residence at Wavertree, that she paid two long visits to Scotland, and a third to the Lakes. Perhaps the time she spent in Edinburgh and its neighborhood, was the most public part of her life—the sensation of curiosity she excited among the circles of "modern Athens," was great—and the attention lavished on her must, some of it, have been hard to bear with a grave face. One lady pursued her to the Castle garden, and introduced herself "as having discovered her to be Mrs. Hemans by a secret sympathy, which assured her she could not be mistaken"—one, herself a writer of no inconsiderable fame, desired to know, "whether a bat might be allowed to appear in the presence of a nightingale." These anecdotes are gathered from eyewitnesses—but a part of her Scotch journey will be best told in one or two of her own letters:—

Chieftwood, July, Tuesday morning.

"Whether I shall return to you all "brighter and happier" as your letter so kindly prophesies, I know not: but I think there is every prospect of my returning, more fitful and wilful than ever; for here I am leading my own free native life of the hills again, and if I could but bring some of my friends, as the old ballad says, 'near, near, near, me,' I should indeed enjoy it—but that strange solitary feeling which I cannot chase away, comes over me too often like a dark sudden shadow, bringing with it an utter indifference to all things around. I lose it most frequently, however, in the excitement of Sir Walter Scott's society, and with him I am now in constant intercourse, taking long walks over moor and woodland, and listening to song and legend of other times, till my mind forgets itself, and is carried wholly back to the days of the Siogán and fiery Cross, and the wild gatherings of Border chivalry. I cannot say enough of his cordial kindness to me; it makes me feel when at Abbotsford, as if the stately rooms of that ancestral looking place, were old familiar scenes to me. Yesterday he made a party to show me 'the pleasant banks of Yarrow,' about ten miles

from hence; I went with him in an open carriage, and the day was lovely, smiling upon us with a real blue sunny sky, and we passed through I know, not how many storied spots, and the spirit of the master mind seemed to call up sudden pictures from every knoll and cairn as we went by, so vivid were his descriptions of the things that had been. The names of these scenes had to be sure, rather savage sounds; such as 'Slate Man's Lea,' 'Dead Man's Pool,' &c., but, I do not know whether these strange titles did not throw a deeper interest over the woods and waters, now so brightly peaceful—we passed one meadow on which, Sir Walter's grandfather had been killed in a duel—'Had it been a century earlier,' said he, 'a bloody feud would have been transmitted to me, as Spaniards bequeath a game of chess to be finished by their children,—and I do think, that had he lived in those earlier days, no man would have more enjoyed what Sir Lucius O'Trigger is pleased to call 'a pretty quarrel.' The whole expression of his benevolent countenance changes, if he has but to speak of the dirk or the claymore: you see the spirit that would 'say amidst the trumpets, ha! ha!' suddenly flashing from his gray eyes, and sometimes, in repeating a verse of war-like minstrelsy, he will spring up as if he caught the sound of a distant gathering cry.

"But I am forgetting beautiful Yarrow, along the banks of which, we walked through the Duke of Buccleugh's grounds, under old, rich, patrician looking trees; and at every turn of our path, the mountain stream seemed to assume a new character, sometimes lying under steep banks, in dark transference, and sometimes

Crested with tawney foam,

Like the mane of a chessnut steed.

And there was Sir Walter behind me, repeating, with a tone of feeling as deep as if then only first awakened.

They sought him east—they sought him west,
They sought him far with wail and sorrow;
There was nothing seen but the coming night,
There was nothing heard but the roar of Yarrow.

It was all like a dream. Do you remember Wordsworth's poem, 'Yarrow visited?' I was ready to exclaim in its opening words, 'And is this Yarrow?' There was nothing to disturb the deep and often solemn loveliness of the scenery: no rose colored spencer, such as persecuted the unhappy Count Forbin amidst the Pyramids—Mr. Hamilton, and Mrs. Lockhart, and the boys who followed us, were our whole party; and the sight of shepherds,—real, and not Arcadian shepherds,—sleeping under their plaids, to shelter from the noon-day, carried me at once into the heart of a pastoral and mountain country. We visited Newark Tower, where, amongst other objects that waken many thoughts, I found the name of Mungo Park, (who was a native of the Yarrow vale,) which he had inscribed himself shortly before leaving his own bright river, never to return. We came back to Abbotsford, where we were to pass the remainder of the day, partly along the Ettrick, and partly through the Tweed: on the way, we were talking of trees—in his love for which, Sir Walter is a perfect Evelyn. I mentioned to him what I once spoke of to you, the different sounds they gave forth to the wind, which he had observed: and he asked me, if I did not think that an union of music with song, varying in measure and expression, might in some degree imitate, or represent, those 'voices of the trees.' He described to me some Highland music of a similar imitative character, called the 'Notes of the Sea Birds'—barbaric notes truly they must be. In the evening, we had a great deal of music; he is particularly fond of national airs, and I played him many, for which, I wish you could have heard how kindly and gracefully he thanked me. But, O! the bright swords! I must not forget to tell you how I sat, like Minna in the 'Pirate,' (though she stood or moved, I believe,) the very 'Queen of Swords.' I have the strangest love for the flash of glittering steel, and Sir Walter brought out, I know not how many gallant blades to show me; one which had fought at Kilsnankie, and one which had belonged to the young Prince Henry, James the First's son, and one which looked of as noble race and temper as that with which Cœur de Lion severed the block of steel in Saladin's tent. What a number of things I have to tell you. I feel sure, that my greatest pleasure from all these objects of interest, will arise from talking them over with you when I return. I hope you have received my letter with an account of the Rhymer's Glen, and the

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little drawing of Chiefswood, for which I now send you a pendant in one of Abbotsford, which is at least recommended by its fidelity."

SUMMARY.

JOHN RANDOLPH OF ROANOKE.—"E'en in his ashes live his wonted fires," for even now that he has long ceased to be of the number of the living, the peculiarities of his temper, keep alive the interest about him. The Virginia Court, after being occupied some time about the validity of certain of his wills, have decided by a bare majority in favor of that of 1832. An appeal is to be taken. Meanwhile, the Richmond Enquirer publishes that will, which we subjoin. We agree with the Enquirer that it is "a remarkable document," and marked with "originality"—but what does the Enquirer mean in saying it is "stamped with the genius of that extraordinary man?"

[From the Richmond Enquirer.]

GENERAL COURT.—John Randolph's Will.—On Friday, the argument on the Will was continued—Mr. John M. Patton appeared as counsel for the committee of Henry St. George Randolph, the nephew of John Randolph. Mr. P.'s object was to set aside all the Wills which had been offered for probat. Gen. Walter Jones closed the argument on Friday, in opposition to the Will of January 1, 1832. On Saturday, Mr. Chapman Johnson concluded the argument in support of the Will.

Yesterday, the Court proceeded to pronounce their opinion on the validity of the Will of 1832—but without assigning their reasons.

The following Judges, decided in favor of the Will, viz: Judges Saunders, Parker, Field, May, Duncan and Estill. The following Judges decided against the Will, viz: Judges Smith, Lomax, Scott, Thompson and Clopton.

The Will has, therefore, been admitted to probat by a majority of one. But an appeal has been taken to the Court of Appeals.

IN THE NAME OF GOD, AMEN.—I, John Randolph, of Roanoke, in the county of Charlotte, and Commonwealth of Virginia, do ordain and appoint this my last Will and Testament, hereby revoking all other Wills and Testaments and codicils whatsoever, in manner and form following; that is to say: On the first day of January, one thousand eight hundred and thirty-two, to which I have set my hand and affixed my seal, binding my heirs and assigns forever.

I give and bequeath all my estate, real and personal, in possession or action, reversion or remainder, to John C. Bryan, only son of John Randolph Bryan and Elizabeth Coalter his wife, daughter of my dear sister Fanny, for and during the life of the said John C. Bryan, with remainder to his eldest son, in fee simple, to him and his heirs forever: and in defect of such issue, then to the son of Henry St. George Tucker, called John Randolph, after me, for and during his natural life, with remainder to his eldest son; and, in defect of any such issue, then to Tudor Tucker, brother of the aforesaid Randolph Tucker, for and during his natural life, with remainder to his eldest son.

And I do hereby appoint my friends, Wm. Leigh of Halifax, and my brother, Henry St. George Tucker, President of the Court of Appeals, Executors of this my last will and testament, requiring them to sell all the slaves and other personal or perishable property, and vest the proceeds in Bank stock of the Bank of the United States, and in default of there being no such Bank, (which may God grant, for the safety of our liberties,) in the English three per cent. Consols, and in case of there being no such stocks (which also may God also grant for the salvation of Old England,) then in the United States three per cent. stock, or in default of such stock, in mortgages on land in England.

From the sale of my perishable property I except my library, books, maps, charts, and engravings included, my pictures, plate, household linen, and the furniture of my bed chamber in the old house, and all the furniture in the new house, wines, together with such other articles as my said Executors may deem proper to keep for the benefit of the heir. And my will and desire is, that my said Executors may select from among my slaves a number, not exceeding one hundred, for the use of the heir, the remainder to be sold. I also desire that my Bushy Forest Tract of land may be sold

and made chargeable with such debts and legacies as hereafter I may see fit to give, when I shall have more leisure to make my Will—this being made in consequence of having cancelled a former Will this night, in presence of William Leigh aforesaid, the sole Executor under that Will, and joint Executor under this Will, which I make to guard against the possibility of dying intestate.

I have in the Bank of Virginia upwards of 20,000 dollars, of which sum I desire payment to be made for the land purchased by me the day before yesterday, of Elisha E. Huntley; and I bequeath the remainder to be equally divided between my said Executors, Wm. Leigh and H. S. C. Tucker, Esquires; and I further charge my Bushy Forest estate with a further legacy to John Randolph Leigh, youngest son of Wm. Leigh aforesaid, of five thousand dollars.

And it is my will and desire, that no inventory be taken of my estate, except of slaves and horses, and that no security be given by, or required by my said Executors, having full faith in their honor, neither shall they be held to account to any Court or persons whatsoever, for their discharge of this trust so confided by me in them.

To Dr. John Breckenbrough I leave all my French plate, now in Richmond at J. P. Taylor's. Also my chariot and harness, and the horses called John Bull and Jonathan, alias John W.

To John Wickham, Esquire, my best of friends without making any professions of friendship for me, and the best and wisest man I ever knew, except Mr. Macon, I bequeath my mare Flora, and my stallion Gascoigne, together with two old-fashioned, double-handled silver cups and two tankards, unengraved—the cups are here and the tankards or cans in Richmond, and I desire that he will have his arms engraved upon them, and at the bottom these words, "From J. R. of Roanoke to John Wickham, Esquire, a token of the respect and gratitude which he never ceased to feel for his unparalleled kindness, courtesy and services."

To Nathaniel Macon I give and bequeath my oldest high silver candlesticks, my silver punch ladle with whalebone handle, a pair of silver cans with handles and my crest engraved thereon, my hard metal dishes that have my crest of J. R. in old English letters engraved thereon, also the plates with the same engraving, the choice of four of my best young mares and geldings, and the gold watch by Roskell, that was Tudor's, with the gold chain; and may every blessing attend him, the best and purest and wisest man I ever knew. To my brother Henry Tucker, my gold watch by Barwise.—The chronometer by Arnold, and knives and forks, &c. from Rodgers, to go to the heir. To William Leigh, all duplicates of my books, and my brood mares Last Chance and Amy. To H. Tucker, Young Whalebone and Young Never Tire, also Topaz and Janus, and Camilla, and Marcella.

JOHN RANDOLPH, of Roanoke.

PROGRESS OF AMERICAN MANUFACTURES.—We have just seen the exhibition card of American buttons, manufactured by Ives, Scott & Co., Waterbury Ct.—of whom Clark & Walton are the agents—and certainly, no where, we apprehend, can more finished specimens of the different varieties of buttons be seen, than this card exhibits.—So successful, indeed, has this manufacture become, that it now, as we understand, defies competition from abroad.

NORFOLK, July 19.—Naval.—It is rumored that Com. Morris will be ordered to the North Carolina 74, at present undergoing repairs at the Navy Yard, Gosport. That Com. Elliott, will be detached from the Constitution, and take the place of Com. Morris in the Navy Board. Capt. Shubrick will be ordered to the Constitution. Purser Etting has also been detached from the Constitution, and Purser John N. Hambleton ordered to that ship.—[Beacon.]

NAVAL.—The United States ship Erie, Captain Percival, sailed from Buenos Ayres, June 1, for Mont Video and Rio Janeiro.

The Commencement of Union College (Schenectady), took place on the 23d instant. The degree of A. B. was conferred on eighty-eight members of the graduating class.

The honorary degree of A. B. was conferred on Wm. Belden, Jr. of Brooklyn, N. Y.

The honorary degree of A. M. was conferred on

Amos W. Brown, Adam Crounce, Lyman Cobb, and Caleb Tichenda. The same degree was conferred on 20 of the Alumni of the College.

The degree of D. D. was conferred on the Rev. John Breckenridge; that of L. L. D. on Roger B. Taney, of Washington City, and Abraham Van Vechten, of Albany.

We learn by the ship Hope, which arrived at New Bedford on Friday last, from Talcahuana, that the people at that place are busily employed in rebuilding the town, which had been totally destroyed by an earthquake. The editor of the N. Bedford Mercury says—"It is an old saying with the Spaniards in that country, that earthquakes do not visit them but once in a century; therefore they feel full confidence that they shall not be disturbed again in the present generation, and the rest they leave to posterity. The style of building, streets, &c is to be much improved.

UNITED STATES AND RUSSIA.—The Globe of Wednesday contains the following article:—"It will be recollected that a Convention was concluded between the United States and Russia in April 1824, regulating various matters connected with the commerce and navigation of the two nations on the northwest coast of America. By the 4th article it was stipulated that the ships of both nations might, during a term of ten years, frequent, without hindrance, the interior seas, gulfs, harbors, and creeks of each nation on that coast, for the purpose of fishing and trading with the natives of the country. The ten years expired in April, 1834; and we understand that formal notice has been given by the Governor of the Russian Colonies, to the masters of the American ships then trading there, that they could no longer claim, under the Convention, the right of landing at all the landing places, without distinction, belonging to Russia on that coast. Those interested in the trade will not fail to observe that, under the 2d article of the Convention, it is necessary for all American vessels, resorting to any point on that coast, where there is a Russian establishment, to obtain the permission of the Governor or Commander."

LINE OF PACKETS BETWEEN CHARLESTON, S. C., AND LIVERPOOL.—We learn from the Charleston Courier, of 20th inst., that active efforts are making to form a joint stock company, with a capital of \$150,000, for procuring four packet ships, to sail at stated intervals, between that city and Liverpool. The shares are \$500 each. Mr. Wm. Seabrook, of Charleston, had undertaken to furnish one ship—subscriptions sufficient for another had already been received, so that one half of the stock may be considered as taken.

A STRANGE FISH.—A sea monster has been caught somewhere in the neighborhood of Norfolk, which is thus described by the Norfolk Beacon:

"Its general outline is that of a turtle, the fins or flappers being much longer. The whole fish is covered with a shining black cuticle or outer skin, (easily removed,) with the exception of the top of the head and the spinous processes of the back, which are white, with irregular outlines, as if it had been rubbed in three places. Immediately under the skin is a bony covering, extending over the back and down the sides, ridged with seven or nine bony prominences or spines, running nearly parallel with the back bone. The head is that of a turtle, with the upper lip or bill notched, so as to form two prominent pointed teeth or tusks. The throat and inner part of the mouth is fretted with spikes about two lines thick at the base, an inch long, of a horny substance, hanging loosely, but looking towards the throat, so as to permit a ready entrance, and completely preventing regurgitation, or egress. It measures eight feet in length, and nine feet from tip to tip across the fins.

It is said that as many as two thousand persons are now suffering at Baltimore, from the effects of poisoned sugar. The disease baffles the skill of the doctors.

TEN TO ONE.—Strict attention to office hours is a duty incumbent on every public officer. We heard of a case once of an American Consul in a foreign country, who was not remarkable for his attention to duty. A gentleman calling upon him

one day, found his office shut, and a label sticking upon the door with these words: "In from ten to one." Having called again several times within those hours, without finding him, he wrote at the bottom of the label, "Ten to one he's not in."—[Philadelphia Gazette.]

THE JERSEY CITY GAZETTE.—We do not, in all our exchange list, receive a neater, better printed, or more carefully got up paper, than this semi-weekly from over the river. It is owned and edited by *Robt. U. Lang*. It is creditable, and we hope profitable, to him, and may too be looked upon as "a sign" of the growth and improvement of *Jersey City*, where it is printed.

CHICAGO, July 18.—**THE LAND SALES.**—The amount of money received at the Land Office in this town for lands sold from 28th May till the close of the land sale, is a little over \$586,500, of which about \$353,500 were for lands sold at auction, and the balance under the preemption law. The exact amount cannot, as yet, be ascertained.

[COMMUNICATED FOR THE N. Y. AMERICAN]
In the year 1801, Mr. and Mrs. B. visited the Highlands of Scotland. The previous year, the crops were bad, and of course they expected to hear of great suffering among the poor. Mrs. B. on being asked if this had not been the case, replied, "I have never known less distress than during the dear year, as it was called. All the distilleries were stopped by order of Government; of course the grain usually employed in them, was in the market for food. This put the price of liquor beyond the reach of the poor, and being sober they worked more, and were more healthy. No doubt the rich helped them but little, if any more, than in former years." X.

SHOEMAKING AT LYNN.—It is estimated that not less than two million pairs of shoes were made at this place during the past year—giving employment to nearly four thousand persons.

GOLD LEAVES.—About two millions of gold leaves are manufactured in London per week. The intrinsic value of each is about one half penny, or nearly a cent of our money.

LARGE FREIGHT.—The Steamer *Wm. Gibbons* which arrived on Wednesday from Charleston, brought about 200 passengers. Any packet to or from Europe would be thankful to earn as large a freight. The steamboat arrangement to Charleston is one of great public utility, and we are happy to see it so abundantly rewarded.—[Journal of Com.]

SINGULAR.—The *Montreal Herald* states that a laboring man named *Hawkins*, died in that city on the evening of Sunday, the 19th instant, from the effects of a sting on the cheek, from some venomous insect, on the previous Thursday. Before medical advice was resorted to, breathing was obstructed, and the swelling had extended over the greater portion of the body. He expired in a most dreadful state of agony, and has left a wife and six young children. What species of insect he was stung by, the *Herald* says, we could not ascertain, but he described it as having been very small.

EUROPEAN INTELLIGENCE.

FOREIGN NEWS BY THE ROSCOE.—We gave yesterday a brief abstract of the chief items of intelligence by this ship. A more deliberate perusal of our papers—since received—enables us to add some details.

The *Morning Post* of the 23d, discredited the rumor that *Zumalacaregu* had been wounded, and the victory of *Iriarte*. The *Courier* seems to believe both. We, therefore, publish the accounts from the Paris papers, together with the notice, that the Carlists had actually undertaken the siege of *Bilboa*:

PARIS, June 20.—The *Journal de Paris* of last night contained the following intelligence:—

"A telegraphic despatch of this morning announces that, on the 16th inst., *Zumalacaregu* was grievously wounded in his right thigh, and resigned his command to *Erazo*. He has been conveyed to *Durango*.

"On the 18th the siege of *Bilboa* was still going

on. Intelligence is expected from *Valdez*, who is advancing to the relief of the town."

This wound of *Zumalacaregu* may be reckoned a victory for the *Christinos*, for almost all the defeats they have experienced, have been due to that brave and talented chief. *Erazo*, though a brave and clever officer, is vastly inferior to *Zumalacaregu*.

Thus all the reports respecting the taking of *Bilboa* have turned out false; and it is very probable that it will not fall into the hands of the Carlists now that *Valdez* is hastening to its relief, and that *Zumalacaregu* is no longer with his men to guide them to victory.

The Urban guard and the garrison of *Bilboa* are resolved not to surrender; they have sworn to bury themselves beneath its ruins rather than deliver up the town to their enemies. Heavy artillery has been sent them from *St. Sebastian*, and cannons have been posted in the streets to oppose the Carlists, should they attempt to force an entrance. This resolution will doubtless meet with success.

The latest intelligence (the Ministerial Bulletin excepted) which has been received from *Bilboa*, is of the 14th: at that time the town was blockaded by *Zumalacaregu*, and several shells had been thrown into it. This news was brought to *St. Sebastian* by a steamer.

There is every reason to believe that the Queen's troops have obtained a decisive victory over the Carlists in the vicinity of *Vittoria*. There are, however, two versions of the action. I shall send you both, commencing with the one which I consider the most entitled to credit, and which is to the following effect:—

"On the 11th instant a serious encounter took place within two leagues of *Vittoria*. *Valdez* feigned to be retreating on *Vittoria*, and sent the major part of the 9,000 men he commanded to that town. The Carlists, whose forces consisted of twelve battalions, fell with great impetuosity on the *Christino* General's cavalry and infantry.—*Valdez*, by a maneuver, which he had concocted previously, then made his troops come up with such rapidity that the attacking Carlists were instantly broken, and the field of battle covered with their slain; 400 Carlists were besides made prisoners by the Queen's troops."

This account was brought by the steamer I have just alluded to.

The other account is contained in a letter addressed yesterday evening to the *Messenger*, by the Spanish General *Mendez Vigo*. It gives no date, and asserts that *Zumalacaregu* commanded the Carlists defeated on this occasion, and that from 3,000 to 4,000 prisoners were made by the *Christinos*, whose forces consisted but of four regiments of infantry and 600 horse, under the command of General *Iriarte*, who, it must be owned, is a gallant officer. The following is the extract from *Mendez Vigo's* letter:

"I have just received a letter from *Bayonne* of the 13th, stating that General *Iriarte* has fought a glorious action with *Zumalacaregu* in person, within four leagues of *Vittoria*. This General, who was accompanying *Espartero* in his retreat from *Bilboa*, on battle being offered by the insurgents, put himself at the head of four regiments of infantry and 600 cavalry, and completely defeated the Carlist chief, from whom he took from 3,000 to 4,000 men, and all his artillery, which consisted of seven field pieces."

On the other hand, the garrison of *Bergara* has joined the Carlists. This has also been the case with 150 men of the garrison of *Villafranca*; the remaining 230 have been escorted to *Bilboa* by the Carlists.

The garrison of *Eybar* is said to have surrendered as prisoners of war, and it is stated that the Carlists found in that town 4000 muskets, 7 cannon, &c., besides a good supply of ammunition, military stores, and provisions.

The *Navarre Junta* entered *Elisondo* on the 13th. There are 5 Carlist battalions in the neighborhood of that town.

The *Renocateur* of yesterday reported that the celebrated *El Pastor*, the Commandant General of *Guipuscoa*, has taken refuge in France. This must certainly be an error. The patriotism of *El Pastor* is well known. The brave General has several relations in the vicinity of *Bayonne*, and a visit to them has probably been converted by his enemies into a desertion of his duty. S.

[From the *Messenger*.]

PARIS, June 20.—The *Sentinel*, of the 16th,

confirms the advantage gained by *Iriarte*. It says: "We learned yesterday, and we are assured, that General *Iriarte*, who was at *Vittoria*, seeing some Carlist battalions, with seven cannon, approach the town, resolutely sallied out to meet them, with 400 cavalry and some infantry. Having killed many of their men, and captured the seven cannon, *Iriarte* returned to *Vittoria*."

The first part of the following letter from our correspondent, may throw some light on the telegraphic despatch dated the 19th, and announcing the wounding of *Zumalacaregu* on the 16th:

"**BAYONNE, June 16.**—The Carlists are besieging *Bilboa*, and many families who have quitted that city arrive here every moment. The most recent accounts that we have received are, that the firing on the town commenced the day before yesterday, at nine in the morning, with eight cannon and one mortar.

"The firing was pretty brisk till two o'clock in the afternoon; at that moment it suddenly ceased. We do not know where it was re-opened afterwards, or whether the arrival of *Valdez*, who is known to have marched in that direction, had rendered a battle or a retreat necessary.

We must soon learn the truth. *Valdez* was at *Vittoria* with 22,000 men, including the reinforcements brought by *Espartero*, and being only nine leagues from *Bilboa* would be inexcusable if he suffered a town of such importance to be attacked without making a vigorous attempt to succor it.

Bilboa has 5,000 men within its walls, and must have received some reinforcements from *St. Sebastian* and *Santander*, which set out the day before yesterday.

Colonel *St. Yon*, the officer commissioned by the French Minister of War to watch the progress of the insurrection in the North of Spain, had returned to Paris, and made his official report of what he witnessed, including his opinion of what force would be necessary to put an end to the conflict. He says that a force of at least 120,000 men, and a four years' occupation of the territory, would be required to crush the rebels, and even then there would be no security against future insurrections, after the withdrawal of the troops: but he adds, that there is no danger of the overthrow of the existing Government of Spain, because as soon as the Carlists cross the *Ebro*, they are in "an enemies country."

The border war between *Ohio* and *Michigan*, figures largely in the London papers, as though it might lead to something.

The present *Earl of Devon*, (the successor of Lord *Courtenay*) was a deputy clerk of Parliament when the title fell to him.

The death of *Cobbett* is variously commented on by the London press, the language of eulogy being chiefly used in regard to him, by the *Tory* papers!

His death seems to have been occasioned by inflammation of the throat, and consequent debility.

We have among our miscellaneous extracts inserted a notice of this extraordinary man from the *Morning Chronicle*.

COTTON FROM ALGIERS.—Some specimens of the cotton grown in *Algiers*, which have recently been sent to Paris, have excited considerable surprise. The cotton is superior to that imported from *New Orleans*. It is finer and stronger, and will bear comparison with either the cotton from *Bourbon* or *Cayenne*.—[*Le Voleur*.]

FROM FRANCE.—By the *Champlain*, *Havre* papers of 17th ult., with Paris accounts of the 16th, are received. We have examined the *Havre Journal* of the 16th and 17th, politely put at our disposition by the *Daily Advertiser*, but find nothing of interest.

The *Moniteur* contains officially the law for the payment of the American claims, agreeably to the votes of the two Chambers. A sketch of the debate in the *Peers* on the day the bill passed, may be found below.

CHAMBER OF PEERS—Session of June 12.

Presidency of the Count Portalis (Vice President.) Messrs. Duperre, Maison, de Broglie and Duchatel are on the Minister's Bench.

The order of the day calls for the discussion on the report of a law for carrying into effect the American treaty.

M. de Barante applies himself to justify the report of the Committee, and to reply to the objections made yesterday by the adversaries of the law. He closes with persisting in the conclusions of the committee who proposed the adoption of the law.

The Chamber proceeded to take up the different articles of the law.

Article 1, is put to the vote.

M. Dubouché complains that the power of the Chambers has been entirely misunderstood, and requires that the interest should not accrue before the day on which the Chambers may have adopted the law.

M. de Broglie in a few words replies to M. Dubouché. No further debate ensued, and the article is adopted.

M. the Baron Mounier, made some observations on Art. 2. He requires that Government shall not lose sight of the interests of those who have ceded land in Louisiana, and thinks that 1,500,000 francs reserved will not be sufficient to meet the claims which will arise. M. de Broglie replies, that the Government will continue to support these claims as it has always done.

Articles 2 and 3 are adopted.

The Chamber proceeded to vote on the whole Bill. The following is the result. Votes 147—white balls 125, black balls 22. The law is adopted by the Chamber.

The Chamber of Peers on the 16th was occupied all day with trying the prisoners of April.

Rumors of the success of the Carlists, in different parts of Spain were circulating, and had affected the French Funds a little. Bilbao was said to have fallen into their hands—and at Burgos, the republic was said to be proclaimed. Nothing authentic, however, is given.

The dates from Madrid are of the 11th. By a decree of the 10th, the Queen accepted the resignation of Martinez de la Rosa, and named Count Torreno President of the Council of Ministers for foreign affairs, ad interim.

The Moniteur has the following:—"It being the intention of the King to authorize all such Frenchmen as wish to enter into the service of the Queen of Spain, to do so without losing the quality of their citizenship to France, all demands for such authorization must be addressed to the Ministers of Justice, conformable to Art. 21 of the Civil Code."

[Gleanings from European Papers.]

A Lyons paper of the 12th states, that at Alexandria, in Piedmont, on the 5th, some eighty persons of the Jewish persuasion being assembled in the third story of a building, to celebrate a wedding, at the moment of beginning a dance, the floor gave way, carrying with it all the company, and breaking through the 2d and 1st floors, buried them beneath the ruins. Thirty-six of the number were dug out dead, and twelve others died the next day of their wounds. Among the dead was the Colonel of a regiment in garrison there, and the Jewish Rabbi.

Lord Courtenay—who passed some years in this country, and has since lived in France, recently died there. He had become Earl of Devon during his forced exile.

His English property goes to a nephew in England, but his beautiful estate of Draveil, near Paris—well and happily do we remember it, in other days, when owned by an American—with all its furniture, he left, as we learn by the Paris papers, to a servant. This legacy is estimated at two millions of francs. The brother of the legatee keeps an English eating house in Paris.

It is said that a marriage between the Duke of Orleans, and a princess of Wirtemberg is seriously agitated, and that the Emperor Nicholas, whose

influence at the Court of Stutgard is paramount, far from opposing, favors such an alliance.

CHEAPNESS OF BOOKS IN FRANCE.—Capt. Ross's two guinea and a half volume, of his artie residence is re-printed in Paris for five francs, about one twelfth.

Mr. Glover, an English Artist, has gone to Van Deimen's Land, for the purpose of taking views of its peculiar scenery—and sending them home for exhibition.

Lord Gosford, the newly appointed Governor of the Canadas, has been created an English Peer by the title of Baron Worthingham, of Beccles, in the county of Suffolk.

BUENOS AYRES.—By the Braganza, dates from Buenos Ayres to the 9th of June have been received.

Captain Pierre Espiaux, of the French frigate Thisbe, died at Buenos Ayres on the 17th of May, and was buried with military honors on the 19th. Among the attendants at his funeral were Mr. Dorr, the United States Consul, and Capt. Percival and the officers of the United States sloop of war Erie.

The British sloop of war Acteon, Lord Edward Russell, commander, arrived at Buenos Ayres on the 31st of May, having sailed from Plymouth on the 22d March.

Some interest appears to have been created by the detention of a French brig—the Hermione—on suspicion of having smuggled goods on board.

A long correspondence ensued between the Government and the French Consul, the result of which was, that the brig was allowed to sail, merely, however, as an indulgence—the laws having been much relaxed heretofore—but notice is given that henceforth they will be most rigidly enforced.

A splendid ball was given by Mr. Hamilton, Minister Plenipotentiary of his Britannic Majesty, on the 28th of May, in honor of the King's birthday. Captain Percival, and Lieutenants Pope, and Eagle, of the Erie, were among the guests.

The America, at Boston, from Calcutta, whence she sailed March 19, reports that Lord Wm. Bentinck, Governor General of India, left Calcutta two days previous in H. B. M. ship Curacao, for England. Sir Charles Metcalf, Governor General of Arga, acts as Governor General of India, until a new appointment.

Love in the Dew.

A maiden went forth at the twilight hour,
To meet her true love in a dewy bower.
Where the rose and sweet briar and jessamine grew,
And the humming bird kissed from their flowers the dew
She was bright as that bird of the glittering wing,
And pure as the dew-drop, and gay as the spring.

And there in the shade,
The youth wooed the maid;

But the moon rose high,
In the cloudless sky,

'Ere she gave her consent and received the ring.

And then she flew,
From love and from dew,

To dream of them both the long night through

The night has fled, and the dew is gone,
The maiden sits in her cottage alone:

She is thinking of love and moonlight hours,
Of dewy kisses and jessamine bowers;

And she wonders if rings and vows are true;
Or as cold as night, and as fleeting as dew,

But her hope is bright,
And her heart is light,

And still she sings
Of bridal rings,

Of rose-buds and vows the long night through.

And all her theme
Is that bright dream,

That came o'er her heart by the moon's pale beam.

The maiden is clad in her bridal dress,
The priest is there to unite and bless;

And beside her the bridegroom has taken his stand,
To taste of her lip and to touch her hand,

And to wed in the face of the world the maid
Whom he wooed at night in the jessamine shade.

No eye more bright,
No heart more light,

Than her's, the bride,
Who smiles in her pride,
For the ring is hers, and the vow is paid.
But maidens beware
Of the dew and night air,
Not always are truth and gold rings found there.

[FOR THE NEW-YORK AMERICAN.]

Musings.—By Flaccus, in the Country.

ABSENCE—A SONG.

The heart no deeper gloom can know,
Than absence's tomb-like solitude—
I better bore thine anger's glow
Than the dull peace which has ensued—

Give back mine eyes, thy form again!
Give but mine ears, thy quickening voice
And though thy glances flash disdain,
And words speak daggers, I'll rejoice!

For oh! reproach I could forgive,
Howe'er it jar'd my brain to hear;
And e'en thy fury's gaze outlive,
To know but this, that thou wert near—

A charm, thy words and looks contain,
That numbs their power to harm, or kill;
Like painted rage, or charmed pain,
'Tis beauty, and 'tis music still—

For, shot through eyelids plumed like those,
Thy glance must of their softness share;
And through those lips, the curse that flows,
Comes sweeten'd from the honey there—

I must return!—though doubly curst—
Though all thy lightning's scathe my brain,
I care not—I have known the worst—
For absence owns no master-pain—

No. 6. W.

[From the Cazenovia Rep. Monitor.]

ORIGINAL POETRY.—The following lines are the production of a lad of 13 years, a student in one of our literary institutions. They were suggested by viewing an engraved representation of Fingal's Cave, in the possession of his room mate. The reader will better understand the argument of the poem, and better appreciate the talents of the juvenile author, by being informed that STAFFA is a small island of Scotland, one of the Hebrides; and is accounted one of the greatest natural curiosities in Europe, if not in the world; the whole southwest end being supported by ranges of basaltic pillars, mostly above 50 feet high, and four feet in thickness. The magnificent cavern, called Fin-macoul, or FINGAL'S CAVE, is on this island, and extends 250 feet in length. Its entrance is a natural arch, 53 feet wide and 116 high, from which the cavern is lighted, so that its farthest extremity may be seen. It is supported on each side by ranges of columns, and roofed by the fragments of others that have been broken off in forming it. The bottom of the Cave is filled by the sea, reaching to the extremity, and in very calm weather a boat may sail into it.

Staffa.

I've gazed on Nature in the sleepy lake,
The green-clothed field, and wildly tangled brake;
I've heard her whisper in the fluttering trees,
Sing in the brook and murmur in the breeze,
Until her quiet music, to my heart
Would love and peace and happiness impart,
And every fretful feeling die away,
Like lover's frowns before his loved one's lay.

And then I've turn'd, on wilder scenes to brood,
And court thee, Nature, in thy sterner mood;
Have seen the cloud-envelop'd mountain ride,
The tranquil forest sleeping on its side,
But not those scenes such pleasing fear impart,
As STAFFA'S rugged isle, where Nature scorns at Art!

Here, on the bosom of the dark blue sea,
That longs to trespass on earth's boundary,
'Neath lowering skies, amid whose twilight gray,
The joyous sunbeams seem afraid to play—
Serenely calm, in solitary pride,
A glorious pile reposes on the tide:
From ocean's depths the giant columns rise,
And lift the self-born structure to the skies,
Firm on its rocky base each pillar stands,
No chisel'd shaft, no work of mortal hands.

Ere man had ceased in savage woods to dwell,
(Roots for his food, his drink the crystal well,)
Ere yet he knew the joys of social life,
And scarcely sought his fellow but in strife,
Ere cities grew, or Farian marble shone,
Those columns stood, and stand while they are gone!

Yet many a broken pillar strewed around,
And many a vista level'd to the ground,
Proclaim, that not e'en Nature's works are free,
All conquering Time, from thy sure mastery!

Then, mortal, blush, to own the selfish grief
Which prompts a murmur if thy days be brief:
When Nature's brightest glories disappear,
Shall thy mortality demand a tear?

Mark where the portal, yawning o'er the wave,
Reveals to view the beauties of the Cave:
Majestic columns rise on either side
The arched canopy above the tide,
Which, mildly glittering with a sparry light,
Shines like the spangled firmament of night.
'Tis Nature's palace. Scorning to abide
In temples less in reverence reared than pride—
The surge's roar more grateful to her ear,
And tempest hymn, than hollow voice of prayer—

She fled, disdainful of a Doric fan,
And built her chapel on the Atlantic main!
Still as we gaze, a feeling more intense
Grows with each look, and steals on every sense;
The frowning arch above, the sea below,
The time-cemented pillars' serried row,
The ocean wrestling with the pile in vain,
That hurls its breakers back in calm disdain,
Blend in a scene so solemn, yet so fair,
That man seems almost an intruder there!
Each hollow blast that slowly dies away,
Sounds like some spirit's melancholy lay;
And as the harmonious cave sends forth its song,
You scarce would start to see an airy throng,
Of mermaids flitting o'er the unruined wave,
And breathing low, soft dirges through the cave:
There is a sadness—but not of the grave—
A breathless life within that wondrous cave—
A deep contentment, a mute harmony,
A holy presence that we cannot see,
But yet can feel; for Ocean murmurs on,
As if in prayer, his deep-toned orison;
And winds without, that rage in lawless din,
Are hush'd to music as they enter in!

Oh! let the skeptic on whose doubting eyes
In vain the beauties of creation rise—
Who, while he views the loveliness of earth,
Can yet disown the power that gave it birth,
Here let him gaze, and any twas chance alone
That rear'd the pile and nicely carved the stone—
That lent each shaft such noble symmetry—
Alas! it mocks his poor philosophy,
Tells him a truth he little dream'd before,
Man was not made to question, but adore.

CIRCULAR. To ENGINEERS and Superintendents of Railroads and Canals.—I am preparing to issue a new edition of my RAILROAD AND CANAL MAP; and being desirous to correct the errors of the first edition, I take the liberty to request the ENGINEER, or SUPERINTENDENT, of every Railroad and Canal in the UNITED STATES, to furnish me at his earliest convenience with a full and precise account of the condition of the railroad under his direction or charge. He is requested to state the length of the road, the number of miles completed, the elevation it surmounts, the radius of its curves, the style of its construction, its average cost per mile, the number, if any, of inclined planes, with stationary engines—in short, every thing which may be of interest to engineers, or others who may be connected with the subject of Railroads and Canals.

To such as comply with the above request, and furnish the desired information previous to the first of August next, a copy of the new edition of the Railroad and Canal Map, will be sent, by mail or otherwise, as may be directed, as soon as completed.

D. K. MINOR.

New-York, June 27, 1835.

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THOMAS ROBINSON, Treasurer.

Norwich, July 11th, 1835.

Jy. 16. tA13

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PATENT RAILROAD, SHIP AND BOAT SPIKES.

The Troy Iron and Nail Factory keeps constantly for sale every extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent), are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y., July, 1831.

Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 223 Waterstreet, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

1782am

H. BURDEN.

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad,

No. 264 Elizabeth street, near Bloecker street, New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad now in operation. J36 17

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to.

Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J3 ROGERS, KETCHUM & GROSVENOR

RAILWAY IRON.

95 tons of 1 inch by 1/2 inch,	Flat Bars in lengths of
200 do. 1 1/2 do. do.	14 to 15 feet, counter sunk
40 do. 1 1/2 do. do.	holes, ends cut at an angle
800 do. 2 do. do.	of 45 degrees, with splicing plates and nails to
800 do. 2 1/2 do. do.	soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, and 3 3/4 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.

9 South Front street, Philadelphia. Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use both in this country and Great Britain, will be exhibited to those disposed to examine them. d11meowr

SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by

E. & G. W. BLUNT, 154 Water street,

J31 6t

corner of Maiden lane.

SURVEYING AND ENGINEERING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new, among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also a Railroad Goniometer, with two telescopes—and a Leveling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker,

No. 9 Dock st., Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested. Baltimore, 1835.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repair, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a revolving telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Sup't of Construction

of Baltimore and Ohio Railroad.

Philadelphia, February, 1835.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1835.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.

German, and Norrist. Railroad

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